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Maw's

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Brook, Parker & Co., Ltd.
Gathergood's Exor.
Goodhall, Backhouse & Co.
Parkinson-Worswick, J.
Potter & Clarke, Ltd.
Ransom, W., & Son
Schmitt & Wildenhayn
Sparks, White & Co., Ltd.

DYEWARES

Clemons, Marshall & Carbert

EAU DE COLOGNE

Farina, J. M.
Farina, J. M. (No. 4)
Flokus, Courtney & Co.
McCracken, J. & E.
Reuter, R. J.
Schutze, F., & Co., Ltd.
Spurway and Cie.

EDUCATIONAL INSTITS.

Bath & West of England College
Birmingham & Midland College
City of London College
College of Preceptors
Elt's College
Glasgow School of Pharmacy
Liverpool School of Pharmacy
London College of Pharmacy
North of England School
Northern College of Pharmacy
School of Pharmacy
South of England College
University of Bristol
Westminster College

EFFERVESCENT PREPS.

Allen & Hanburys, Ltd.
Bishop, Alfred, Ltd.
Bristol-Myers Co.
Cupal, Ltd.
Guest, Thos., & Co.
Wright, Layman & Umney, Ltd.
Wyleys, Ltd.

ELASTIC HOSIERY

Ayrton, Saunders & Co., Ltd.
Burge, Warren & Ridgley, Ltd.
Haywood, J. H., Ltd.
Maw, S., Son & Sons
Surgical Hosiery Co., Ltd.
Wood, Vincent

ELECTRICAL NOVELTIES

Millard Bros., Ltd.
Ward & Goldstone

EMERY AND CLOTH

Oakey, J., & Son, Ltd.

EMULSIFIERS

Bennett, Sons & Shears, Ltd.
Wilkinson, S. W., & Co.

EMULSIONS, C. L. O., &c.

Baiss Bros. & Stevenson, Ltd.
Burgoyne, Burbidges & Co.
Cupal, Ltd.
Lorimer Marshall, Ltd.
Stevenson, H. E., & Co.

ENEMAS

Burge, Warren & Ridgley, Ltd.
Ingram, J. G., & Son
Maw, S., Son & Sons
Newbery, F., & Sons, Ltd.
Warne, W., & Co., Ltd.

ESSENCES, SOL. AND FRUIT

Alliance Drug & Chem. Co.
Barnett & Foster
Boake Roberts & Co., Ltd.
Bush, W. J., & Co., Ltd.
Hay, Wm., Ltd.
London Essence Co.
Newball & Mason
Stevenson & Howell, Ltd.
Stevenson, H. E., & Co.

ESSENCES, CONCRETE

Spurway et Cie.

ETHERS

Baies Bros. & Stevenson, Ltd.
Duncan, Flockhart & Co.
Howards & Sons, Ltd.
Macfarlan, J. F., & Co.
May & Barker, Ltd.
Tyrer, T., & Co., Ltd.
White, A., & Sons

EUOALYPTUS OIL

British Drug Houses, Ltd., The

EXTRACT OF HERBS

Newball & Mason
Potter & Clarke, Ltd.

EXTRACTS (MEDICINAL)

Allen, Stafford & Sons, Ltd.
Barrourghs, Wellcome & Co.
Evans Sons Lescher & Webb, Ltd.
Gathergoods Exor.
Hewlett, C. J., & Son, Ltd.
Parke, Davis & Co.
Ransom, W., & Son

FACTORY, & C., SITES

Great Western Railway
North-Eastern Railway

FERTILIZERS

With's Manure Co.

FILTER PAPER

Burgoyne, Burbidge & Co.

FILTERS

Berkefeld Filter Co., Ltd.

FLYCATCHERS

Alabastine Co. (British), Ltd.
Barracough, J., & Co.
Brook, Parker & Co., Ltd.
Ford, Shapland & Co.
Kay Bros., Ltd.
Smith, Jno. H., & Co.
Strong, Christy
Tunbridge & Wright

FOODS, INVALID, ETC.

Allen & Hanbury's, Ltd.
Bell (John), Hills & Lucas, Ltd.
Benger's Food, Ltd.
Brand & Co., Ltd.
Burgoyne, Burbidge & Co.
Cox, Arthur H., & Co., Ltd.
Deans, Logan & Co., Ltd.
Fairchild Bros. & Foster
Horlick's Malted Milk Co.
"Lemco and Oxo"
Loffhouse & Salmer, Ltd.
Menley & James, Ltd.
Natural Food Co., Ltd.
Southall Bros. & Barclay, Ltd.
Willows, Francis, B. & T.
Woolley, Jas. Sons & Co., Ltd.

FULLER'S EARTH

Mumford, G. S., & Sons

FUMIGATORS

Sanitas Co., Ltd.

GLYCERIN

Prie's Patent Candle Co., Ltd.

GLYCEROPHOSPHATES

Marok, E.
Pointet & Girard

GREASE REMOVER

Parkin & Co., Ltd.

GRINDERS, DRUG, & C.

Allen, Stafford & Sons, Ltd.
Goodall, Backhouse & Co.
Willows, Francis, B. & T.
Wright, Layman & Umney, Ltd.

GRINDERS (MACHINE)

Hardy Patent Pick Co., Ltd.

GUMS

Fink, F., & Co.
Kidon, W. M., & Co.

HAIR DYES

Harker, Stagg & Morgan, Ltd.

HAND-CARTS, & C.

Crews & Co.

HAIR PREPARATIONS

Aironal, Ltd.
Alexandre, L.
Blackie, Robert
Edwards' "Harlene" Co.
Harrison, G. W.
John Strange Winter
Nyto Preps., Ltd.
Osborne, Garrett & Co.
Robare's Aureoline
Saunders, J. Tozean, Ltd.
Van Essen, James & Co., Ltd.
Warner Oliver, Ltd.

HAT CLEANERS

Christy, Thos., & Co.
Senior, Alf., & Co.

HAT DYES

Whitaker & Co.

HEARING APPARATUS

Stols Electrophone Co., Ltd.

HERBS

Brook, Parker & Co., Ltd.
Potter & Clarke, Ltd.
Ransom, W., & Son

HOMOEOPATHIC MEDICINES

Ashton & Parsons, Ltd.
Keene & Ashwell, Ltd.

HOT-WATER BOTTLES

Burge, Warren & Ridgley, Ltd.
Dunlop Rubber Co., Ltd.
Fulham Pottery and Cheavin
Filter Co., Ltd.
Galen Maug. Co., Ltd.
India Rubber, Gntta-percha &
Telegraph Works Co., Ltd.
North British Rubber Co., Ltd.
Tompkins, J., Ltd.
Wood, Vincent
X. L. Rubber Co.

HOTELS

Kingsley Hotel
Thackeray Hotel

HYDROGEN PEROXIDE

May & Baker, Ltd.
Sanitas Co., Ltd.
Tyrer, T., & Co., Ltd.

HYPOPHOSPHITES

May & Baker, Ltd.
Tyrer, T., & Co., Ltd.

ICHTHYOL

Ichthyol Gesellschaft

INHALERS

Oso Medicated Air Co., Ltd.

INSECTICIDES

Christy, T., & Co.
Nyto Preparations, Ltd.
Tomlinson & Hayward, Ltd.

INSECT PENCILS

Chaline & Co.

INSECT POWDER

Dauys Virus, Ltd.
Keating, Thomas

INSTP SUPPORTS

Pond, H. J.
Scholl Manfg. Co.

JUJUBES

Gnest, Thos., & Co.
Potter & Clarke, Ltd.

LACTOBACILLINE

Société "Le Ferment."

LANOLINE

Burrourghs Wellcome & Co.

LARD

Ewen, J., & Sons

LAVENDER WATER.

Bush, W. J., & Co., Ltd.
Rivers, Hill & Co., Ltd.

LEATHER BLACK

Whitaker & Co.

LECITHIN

Chem. Works "Victoria"
Williams, G. M., & Co., Ltd.

LETTER FILES

Eeles, Walker & Co.

LIME JUICE AND CORDIAL

Evans Sons Lescher & Webb, Ltd.
Goodall, Backhouse & Co.
Idris & Co., Ltd.

LINSEED, CRUSHED, & C.

Mumford, G. S., & Sons

LINTS

Liverpool Lint Co.
Maw, S., Son & Sons
Robinson & Sons, Ltd.
Taylor, W. J.
Vernon & Co., Ltd.

LIQUORICE JUICE

Apollo
Evans Sons Lescher & Webb, Ltd.
Jackson, E. E.
Mumford, G. S., & Sons
Solazzi

LITHIA SALTS

British Drug Houses, Ltd., The
Macfarlan, J. F., & Co.
May & Baker, Ltd.

LOOFAHS

Internl. Sponge Importers, Ltd.
Solport Bros.
Swales, Thomas

LOZENGES

Ayrton, Sanders & Co., Ltd.
Guest, Thos., & Co.
Jackson, R. E.
Potter & Clarke, Ltd.
Raines & Co.
Standard Tablet & Pill Co., Ltd.
Warriack Bros.

MACHINERY, PHARMACAL

Allea & Hanburys, Ltd.
Bennett, Sons & Shears, Ltd.
Comet Chemical Co., Ltd.
Gardner, Wm., & Sons, Ltd.
Gosheron, John, & Co.
Hardy Patent Pick Co., Ltd.
Lister, R. A., & Co., Ltd.
Finder, J. W., & Co.
Stokes, F. J., Machine Co.
Wilkinson, S. W., & Co.

MAGNESIA AND ITS PREPS.

British Drug Houses, Ltd., The
Corbyn, Stacey & Co., Ltd.
Henry, T. & W.
Howards & Sons, Ltd.
May & Baker, Ltd.
Phillips, Chas. H., Chem. Co.
Washington Chemical Co., Ltd.

MALT EXTRACT & PREPS.

Boulton, Macro, Ltd.
British Diamalt Co., Ltd.
British Drug Houses, Ltd., The
Burrourghs Wellcome & Co.
Davies, Sons & Co.
Evans Sons Lescher & Webb, Ltd.
Paine & Co., Ltd.

MANICURE CASES

Hovenden, R., & Sons, Ltd.

MARKING INK

John Bond ("Crystal Palace")

MEAT EXTRACTS

Armon & Co., Ltd.
Brand & Co., Ltd.
"Lemco and Oxo"
Tooth's Extract of Meat Co.

MERCURIALS

Alliance Drug & Chem. Co.
Howards & Sons, Ltd.
May & Baker, Ltd.
Tyrer, T., & Co., Ltd.

METAL GOODS

Betts & Co., Ltd.
Eley Bros., Ltd.

METHYLATED SPIRIT

Burrourgh, J., Ltd.
Macnair, A. & Co.
Preston's Liverpool Distillery
Randall & Son, Ltd.

MICROSCOPES

Raphael's, Ltd.

MILK POWDER

Trufood, Ltd.
West Surrey Central Dairy Co.
Ltd.

MINERAL WATERS, SALTS

Apollinaris Co., Ltd.
Hughes, E., Griffiths
Ingram & Royle, Ltd.
Vichy (State Springs)
Vittel

MIXERS AND SIFTERS

Comet Chemical Co., Ltd.
Gardner, Wm. & Sons (Gloucester), Ltd.

MUSTARD PLASTER

Ruef, Julius

NIGHT-LIGHTS

Prescott & Co.

OINTMENTS

Blackie, Robert
Burgess, E.
Calvert, F. C., & Co.
Cartwright, W. B., Ltd.
Cox, Arthur H. & Co.
Oldfield, Pattinson & Co.
Peat Products (Sphagnol), Ltd.
Smith, Maurice,
Zimmermann, Chas., & Co.

OILS, ESSENTIAL

Allen, Stafford & Sons, Ltd.
Alliance Drug & Chemical Co.
Boake, A., Roberts & Co., Ltd.
Bnsh, W. J., & Co., Ltd.
Dodge & Olcott Co.
Evans Sons Lescher & Webb, Ltd.
London Essence Co.
Poppelreuter, W.
Ransom, W., & Son
Schimmel & Co.
Spurway & Cie
Stevenson & Howell, Ltd.
Varaldi, F.
Wright, Layman & Umney, Ltd.
Zimmermann, Chas., & Co.

OILS, MINERAL, FATTY

Allen, Stafford & Sons, Ltd.
Prie's Patent Candle Co.
Schliemann's Oil & Ceresine Co
Stern Sonneborn Oil Co., Ltd.

OLIVE OIL

Goodall, Backhouse & Co.
Sparks, White & Co., Ltd.
Varaldi, F.

OPTICAL GOODS

Anglo-American Optical Co.
Botwright & Grey
Darton, F., & Co.
Maw, S., Son & Sons
Nitsche & Gunther Opt. Co., Ltd.
Raphael's, Ltd.

OPTICAL TUITION

British Optical Institute, Ltd.
Dioptric Association
Spectacle Makers' Company

ORANGE QUININE WINE

Hobson, Joseph, & Son
Melrose-Drover Co., Ltd.
Millar, A., & Co., Ltd.
Robinson, B., & Co., Ltd.

ORGANOTHERAPY

BRITISH ORGANOTHERAPY CO., LTD

OTTO OF ROSE

Spurway & Cie

OTTO OF ROSE (BYNTH.)

Bush, W. J., & Co., Ltd.
Kerfoot, Thos., & Co.
Wright, Layman & Umney, Ltd.

PACKED GOODS

Allen & Hanburys, Ltd.
Baies Bros. & Stevenson, Ltd.
Blackie, Robert
Boulton Macro, Ltd.
Brook, Parker & Co., Ltd.
Cox, Arthur H., & Co., Ltd.
Christy, Thos., & Co.
Cupal, Ltd.
Davies, Sons & Co.
Evans Sons Lescher & Webb, Ltd.
Goodall, Backhouse & Co.
Harker, C. R., Stagg & Morgan
Lorimer Marshall, Ltd.
May, Roberts & Co., Ltd.
Newball & Mason
Oldfield, Pattinson & Co.
Potter & Clarke, Ltd.
Sangers
Standard Tablet & Pill Co., Ltd.

PALATINOIDS

Oppenheimer, Son & Co., Ltd.

PAPER HANDKERCHIEFS

Powell, J. T., & Co.

PASTILLES

Allen & Hanbury's, Ltd.
Asche, C. F., & Co.
Burrourghs Wellcome & Co.
Evans Sons Lescher & Webb, Ltd.
Taverner & Sons, Ltd.
Valda Pastilles
Warrick Bros.

PATENT AGENTS

Barker, R. W.
Newnam, Browne & Co.

PERFUME MATERIALS

Boehringer, C. F., & Soehne
Bush, W. J., & Co., Ltd.
Kerfoot, T., & Co.
Naef, M., & Co., Suocers.
Schimmel & Co.
Schwarz, A. W.
Spurway & Cie.
Varaldi, F.
Wright, Layman & Umney, Ltd.
Zimmermann, C., & Co.

PEPPERMINT OIL

Bing, M. & A. C.
Bush, W. J., & Co. Ltd
Dodge & Olcott Co.

PERFUMES

Allen & Hanburys, Ltd.
Baiss Bros. & Stevenson, Ltd.
Barnet's Perfumery, Ltd.
Bromley, H., & Co., Ltd.
Bush, W. J., & Co., Ltd.
Christy, T., & Co.
Erasmo Co., Ltd.
Evans Sons Lescher & Webb, Ltd
Gambles, J. C., & Co.
Halifor Co.
John Strange Winter
Kerfoot, T., & Co.
Lescol Perfumery Co.
McCracken, J. & R.
Pritchard & Constance, Ltd.
Quelch, H. C., & Co.
Rivers, Hill & Co., Ltd.
Vinolia Co., Ltd.
Warriok Bros.
West, T., & Son
Wolf, F., & Sohn

PESSARIES (SOLUBLE)

Burge, Warren & Ridgley, Ltd.
Kendall, W. J.

PETROLEUM JELLY

Chesbrough Manfg. Co.
Gardner & Andrew
Schliemann's Oil & Ceresine Co.
Stern, Sonneborn Oil Co., Ltd.

PHOTO. CHEMICALS

Boehringer, C. F., & Soehne
Johnson & Sons (Mfg. Chts.), Ltd

PHOTO. GOODS

Ayrton, Sandders & Co., Ltd.
Barclay & Sons, Ltd.
Burroughs Wellcome & Co.
Evans Sons Lescher & Webb, Ltd
Express Developing Co.
Ilford Ltd.
Kent, G. B., & Sons, Ltd.
Lennon, Ltd.
May, Roberts & Co., Ltd.
Newbery, F., & Sons, Ltd.
Rajar, Ltd.

PHOTO. POSTCARDS, ETC.

Rajar, Ltd.

PILL MAKERS

Cox, A. H., & Co., Ltd.
Davies, Sons & Co.
Standard Tablet & Pill Co., Ltd.

PLASTERS

Alcock Manfg. Co.
Berliner, Arthur
Dalmas, A. de St., & Co.
Galen Mfg. Co., Ltd.
Leslies, Ltd.

PLATE POWDER

Lees, A., & Co.

PLEATED PAPER

Darter, Wilkinson & Co.
Smith Bros. & Co.

POLISHES (VARIOUS)

Bradley & Bourdas
Oakley, J., & Sons, Ltd.

POSTAL BOXES

Eeles, Walker & Co.
Robinson & Sons, Ltd.

POWDER PAPER

Pritchard & Constance, Ltd.

PRESS CUTTINGS

Central News

PRINTERS

Clyde Press
Ford, Shepland & Co.
Harrison & Waide
Suttley & Silverlock, Ltd.
Townsend, J., & Sons

PRINTING PRESS

Excelsior Printers' Supply Co.
Paragon Press Co.

PROPRIETARY ARTICLES

Anglo-American Pharm. Co.
Anglo Indian Drug & Chem. Co.
Arnfield, J. C., & Sons, Ltd.

PROPRIETARY ART.—cont.

Ashton & Parsons, Ltd.
Barclay & Sons, Ltd.
Beecham, T.
Bow's Liniment, Ltd.
British Drug Houses, Ltd., The
Burgess, E.
Carnick, G. W., Co.
Chameleon Oil Co., Ltd.
Christy, T., & Co.
Coleman & Co., Ltd.
Corbyn, Stacey & Co., Ltd.
Crimson Cross Dispensary.
Cupal, Ltd.
Cyona Co., Ltd.
Daisy, Ltd.
Davenport, J. T., Ltd.
Demuth, R.
Dunnoan, Flookhart & Co.
Edwards, W., & Son
Evans Sons Lescher & Webb, Ltd
Faulding, F. H., & Co.
Fellows' Med. Manfg. Co.
Fennings, Alfred
Ferris & Co., Ltd.
Fox & Co. (Liverpool), Ltd.
Freeman's Chlorodyne, Ltd.
Fulford, O. B., Ltd.
Gambles, J. C., & Co.
Goodall, Backhouse & Co.
Harrison, Geo. W.
Henry, T. & W.
Hommel's (Dr.), Haematogen
Hughes, E. Griffiths
Iohthylol Gesellschaft
Kay Bros., Ltd.
Kutnow, S., & Co., Ltd.
"Lemco and Oxo"
Lofthouse & Saltmer
Martindale, W.
May, Roberts & Co., Ltd.
Mergentheim Tablets
Mer-Syren (1911), Synd., Ltd.
Newbery, F., & Sons, Ltd.
Odol Chemical Works
Oppenheimer, Son & Co., Ltd.
Owbridge, W. T., Ltd.
Phillips, Chas. H., Chem. Co.
Pontogen Co.
Primer, J.
Resinol Chemical Co.
Richter, O., & Co.
Riedel, J. D., Co.
Rubenstein, Madame H.
Rubwel Co.
Sangers
Sargol, Ltd.
Schimmel & Co.
Scott & Bowne, Ltd.
Squire & Sons
Standard Tablet & Pill Co., Ltd.
Thermogene Co., Ltd.
Thompson & Capper
Tunbridge & Wright
Valda Pastilles
Wait-and-See Proprietary
Warner Oliver, Ltd.
Warrick Brothers
White, A. J., Ltd.
Wilcox, Josean, & Co.
Woodward, W., Ltd.
Wright, Layman & Umney, Ltd.
Zimmermann, C., & Co.

PUFFS

Solport Bros.

PUMPS

Berkfeld Filter Co., Ltd.

QUININE AND SALTS

Alliance Drug & Chem. Co.
Boehringer, C. F., & Soehne
Corbyn, Stacey & Co., Ltd.
Howards & Sons, Ltd.
Pointet & Girard

RADIO-ACTIVE MINERALS

Harrington Bros., Ltd.

RENNET

Fullwood & Bland
Oldfield, Pattinson & Co.

RESINS AND RESINOIDS

Allen, S., & Sons, Ltd.
Maofarian, J. F., & Co.
Ransom, W., & Son
Smith, T. & H., Ltd.

RESPIRATORS

Zimmer & Co.

RUBBER GOODS

Berliner, Arthur
Burge, Warren & Ridgley, Ltd.
Haywood, J. H., Ltd.
Ingram, J. G., & Son
Maw, S., Son & Sons
Surgical Hosiery Co. Ltd.
Tompkins, James, Ltd.
Warne, W., & Co., Ltd.
X. L. Rubber Co.

RUBBER STAMPS

Richford, C. D.

SACCHARIN

Saccharin Corporation, Ltd.

SAMPLE CASES

Keane, Thomas

SANTONIN

Smith, B. A., & Co.

SAPONIN

Field, C. W.

SCIENTIFIC APPARATUS

Reynolds & Branson, Ltd.
Perken, Son & Co., Ltd

SEA SALT

Tidman & Son, Ltd.

SEALING MACHINE

Gosheron, John, & Co.

SEED-DRESSING

Hawker, Arthur E.
Tomlinson & Hayward, Ltd.

SERUMS AND ANTITOXINS

Allen & Hanburys, Ltd.
Barronhs Wellcome & Co.
Evans Sons Lescher & Webb, Ltd
Parke, Davis & Co.
Sohmmerl & Co.
Wilcox, Josean, & Co.

SHARES

MoAdam & Tuckniss

SHEEP DIPS

Burt, Boulton & Haywood

SHEEP MEDICINES

Pettifer, Stephen, & Sons

SHELLAC

Kershaw, H. E., Ltd.

SHOP FITTING

Ayrton-Graham, Ltd.
Cook, George
Evans Sons Lescher & Webb, Ltd
Grant, D.
Josephs, Philip, & Sons, Ltd.
London & Col. Manfg. Co.
Maw, S., Son & Sons
Parnall & Sons, Ltd.
Ruddnok & Co.
Sangers'

SOAPS, TOILET, &c.

Allen & Hanburys, Ltd.
Armour & Co., Ltd.
Bell, John Hills & Lucas, Ltd.
Bromley, H., & Co., Ltd.
Calvert, F. C., & Co.
Chesbrough Manfg. Co.
Christy, Thos., & Co.
Cook, E., & Co., Ltd.
Erasmo Co., Ltd.
Encryl, Ltd.
Evans Sons Lescher & Webb, Ltd
Falford, C. E., Ltd.
Gibbs, D. & W., Ltd.
Harrison, G. W.
Hovenden, R., & Sons, Ltd.
John Strange Winter
Lescol Perfumery Co.
Olivall Anglo-Spanish Soap Co.
Pears, A. & F., Ltd.
Peat Products (Sphagnol), Ltd.
Price's Patent Candle Co.
Resinol Chemical Co.
Wolf, F., & Sohn
Wright, Layman & Umney, Ltd.

SHOULDER STRAPS

Wood, Vincent

SODA FOUNTAINS

Flugel & Co.

SODIUM BICARBONATE

Brunner, Mond & Co., Ltd.
Electrolytic Alkali Co., Ltd.
Howards & Sons, Ltd.
Mumford, G. S., & Sons

SOOTHERS

Newbery, F., & Sons, Ltd.
Schutze, F., & Co., Ltd.
Woolf, Lewis

SPECTACLES

Botwright & Grey
Darton, F., & Co.
Maw, S., Son & Sons
Nitsche & Gunther Opt. Co., Ltd
Raphael's, Ltd.

SPICES

Goodall, Backhouse & Co.

SPIRIT OF WINE

Burrough, J., Ltd.
Preston's Liverpool Distillery

SPONGES

Internl. Sponge Importers, Ltd.

SPRAYS

Burge, Warren & Ridgley, Ltd.
Hovenden, R., & Sons, Ltd.
Maw, S., Son & Sons
Parke, Davis & Co.
Sangers
Toogood, Wm., Ltd.

SPRINKLER CORKS

Betts & Co., Ltd.

SPRUCE BEER

Hobson, Joseph, & Son

STARCH

Mumford, G. S., & Sons

STILLS

Bennett, Sons & Shears, Ltd.
Brown & Son (Automatic)
Stokes, F. J., Machine Co.

STOPPERS

Stipendum Stopper Co.

SUPPOSITORIES

Peat Products (Sphagnol), Ltd.

SURGICAL APPLIANCES AND DRESSINGS

Allen & Hanburys, Ltd.
Bailey, W. H., & Son
Berliner, Arthur
Burroughs Wellcome & Co.
Bush, W. H., & Co., Ltd.
Dalmas, A. de St., & Co.
Davis, John Morgan, & Sons
Galen Manfg. Co., Ltd.
Gimber, W., & Son
Haynes, G., & Co.
Haywood, J. H., Ltd.
Liverpool Lint Co.
Macfarlan, J. F., & Co.
Martindale, W.
Mason Bros. & Chapman
Maw, S., Son & Sons
Quelch, H. C., & Co.
Reynolds & Branson, Ltd.
Robinson & Sons, Ltd.
Surgical Hosiery Co., Ltd.
Taylor, W. G.
Warne, W., & Co., Ltd.
Wood, Vincent
Woolley, J., Sons & Co., Ltd.

SWIMMING FLOATS

May, Roberts & Co., Ltd.
Schutze, F., & Co., Ltd.

SYPHONS

Barnett & Foster
Camwal, Ltd.
Idris & Co., Ltd.
Sharman's Pat. Syphon Co., Ltd

SYRINGES

Bush, H. W., & Co., Ltd.

SYRUPS, MEDICINAL

Fellows' Med. Mfg. Co.

TABLE WATERS

Burrow, W. & J.

TABLET MACHINERY

Allen & Hanburys, Ltd.
Bennett, Sons & Shears, Ltd.
Thompson & Capper
Wilkinson, S. W., & Co.

TABLETS, COMPRESSED

Allen & Hanburys, Ltd.
Bishop, Alfred, Ltd.
British Drug Houses, Ltd., The
Cartwright, W. B., Ltd.
Cox, A. H., & Co., Ltd.
Davies, Sons & Co., Ltd.
Dnnoan Flockhart & Co.
Evans Sons Lescher & Webb, Ltd.
Johnson & Sons (Mfg. Chts.)
Martindale, W.
Parke, Davis & Co.
Standard Tablet & Pill Co., Ltd.
Thompson & Capper
Wand Manfg. Co.
Wigglesworth & Co.

"TABLOID" PRODUCTS

Bnrroughe Wellcome & Co.

TARTARIC ACID

British Drug Henses, Ltd., The
Boehringer, C. H. & Sohn

TEA (TANNIN-LESS)

Sumner's Typhoo Tea, Ltd.

TIN BOX MAKERS

Goodall, Backhouse & Co.
Huntley, Boorne & Stevens
Shirley Bros., Ltd.

TINCTURES, CONCENT

Stevenson, H. E., & Co.

TOBACCO

Singleton & Cole, Ltd.

TOILET ARTICLES

Aironal, Ltd.
Allen & Hanburys, Ltd.
Armour & Co., Ltd.
Ayrton, Saunders & Co., Ltd.
Beetham, M., & Son
Blackie, Robert

TOILET ARTICLES—cont.

Bronnley, H., & Co., Ltd.
Burronghs Wellcome & Co.
Chesebrough Mfg. Co.
Christy, T., & Co.
Cook, E., & Co., Ltd.
Cox, Arthur H., & Co., Ltd.
Daisy Ltd.
Edwards' Harlene Co.
Erasmio Co., Ltd.
Euoryl, Ltd.
Fnlford, C. E., Ltd.
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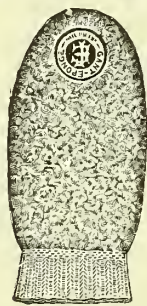
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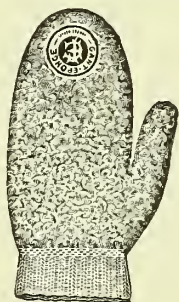
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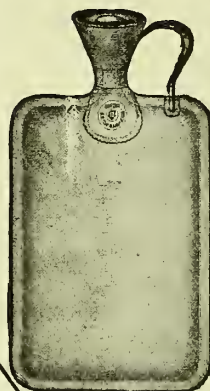
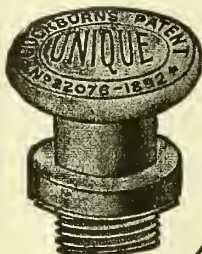
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1½ & 2 oz.	3 & 4 oz.	6 & 8 oz.	10 oz.	12 oz.
6/9	7/-	8/-	12/-	13/6
16 oz.	20 oz.	per gross.		
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1/- per gross extra to above prices.

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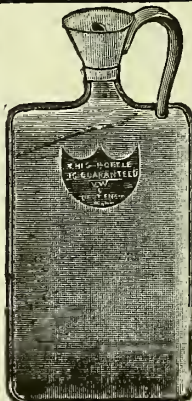
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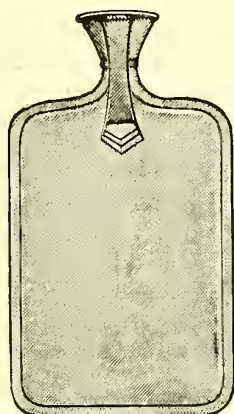
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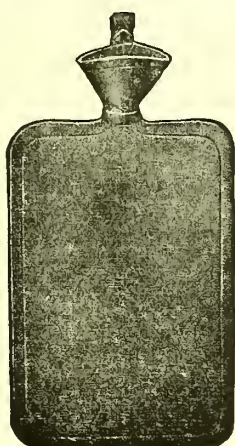
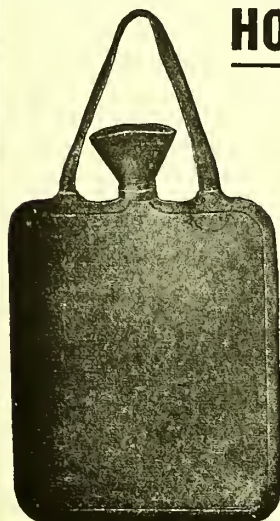
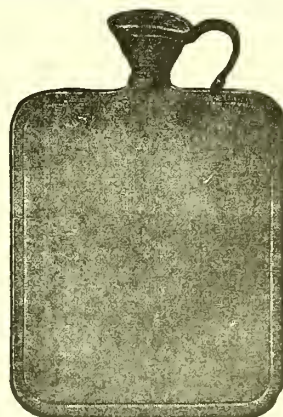
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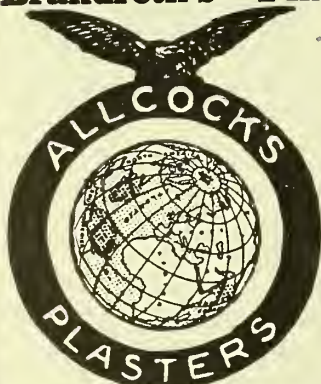
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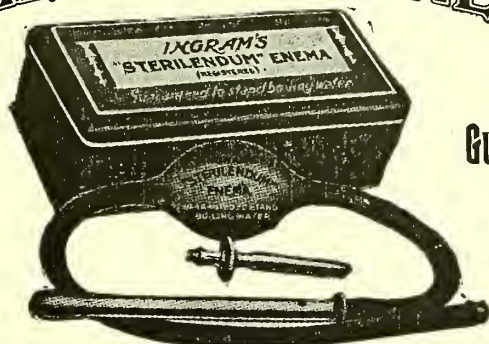
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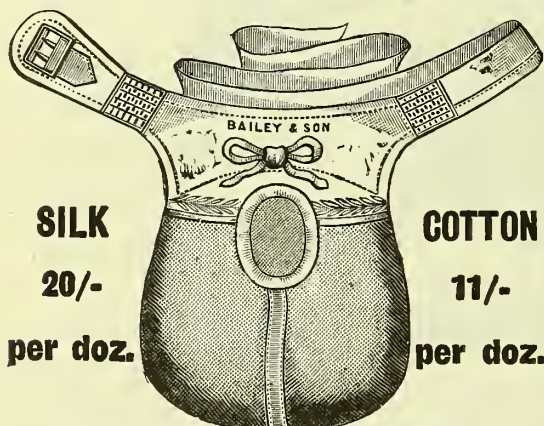
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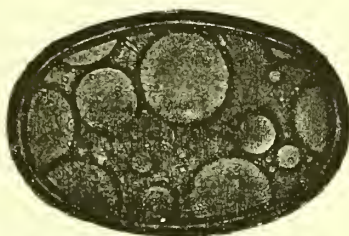
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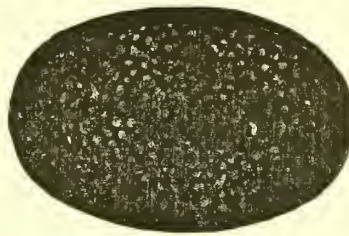
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BEETHAM'S NEW SHOWCARD.—One of the prettiest lithographic productions which have come to us lately is the Larola beauty here depicted. The card measures 24 in. by 18 in., and is all roses, even the word "Larola" being formed from prickly rose-stems. The fair rose-gatherer has rosy cheeks, and she and the setting make so bright a picture that no pharmacy will be complete without it. Copies can be obtained from Messrs. M. Beetham & Son, Cheltenham, the originators of Glycerine-and-Cucumber and Larola.

This handsome Showcard, in 14 colours (size 24 by 17) can be had by any chemist who will give it a good place in his pharmacy.

M. BEETHAM & SON, Cheltenham.

**OVER 100% PROFIT
ENSURED & PROTECTED (P.A.T.A.)
for sellers of**

Laurence's Hair Dyes

One solution, nine shades.

A first-class article with an excellent demand, created entirely on its own merits, and carrying a first-class profit.

Size	Minimum retail.	Minimum wholesale.	
1/-	1/-	7/6	} per doz., less 5% discount.
1/6	1/6	9/-	
2/6	2/3	15/-	
3/6	3/3	21/-	

SPECIAL BONUS.

Buyers of 3 doz. bottles receive 3 bottles gratis (may be assorted and any size).

Do. 6 doz. do. 8 bottles gratis.

Do. 12 doz. do. 18 bottles gratis.

Equivalent in the case of the size in most general demand, viz., 1/6 size, to 4/6, 12/- and 27/- respectively.

SOLE PROPRIETORS—

C. R. HARKER, STAGG & MORGAN,
DEVON WHARF,
Emmott Street, Mile End, London, E.

**By Appointment to
H.M. King George V.**



**Buenos Aires, 1911,
GRAND PRIX.**

**Turin, 1911,
GRAND PRIX.**

HIGHEST AWARDS.



**Johann Maria Farina's
Julichs Platz No. 4**

GENUINE

EAU DE COLOGNE

is known throughout the world by the label on the bottle as shown herewith. Attention is drawn to the No. 4, which is the number of Johann Maria Farina's Factory Place, viz., Julichs Platz No. 4, in the city of Cologne on the Rhine.

Wholesale Agents:
**FICKUS,
COURTENAY & CO., Ltd.**
36 Sackville St., Piccadilly,
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TRY IT IN YOUR BATH SCRUBB'S AMMONIA

BY APPOINTMENT TO H.M. THE KING.

MARVELLOUS PREPARATION

Refreshing as a Turkish Bath. Invaluable for Toilet Purposes.
Splendid Cleansing Preparation for the Hair. Removes Stains and Grease Spots from Clothing.
Allays the Irritation caused by Mosquito Bites. Invigorating in Hot Climates.
Restores the Colour to Carpets. Cleans Plate and Jewellery. Softens Hard Water.

Of all Chemists, Etc. Price 1s. per Bottle.

SCRUBB & CO., LTD., GUILDFORD STREET, LONDON, S.E.

OKELL'S ORIGINAL MONA BOUQUET.

(First introduced by the late JOSEPH O'KELL).

Registered Trade Mark, "DOUGLAS PIER."

The most popular and best-selling perfume in the market.
Retail Prices ... 1/-, 1/6, 3/6, 6/-, 7/6, 10/6, per Bottle,

ALSO 3d. SAMPLE BOTTLES.

Shippers and Wholesale Buyers supplied on the best terms by
THOMAS WEST & SON, 1187 Chester Road, **MANCHESTER.**
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BARNETTS PERFUMES & COLD CREAM

STAND UNRIVALLED.

Samples and Prices (in bulk) on Application.

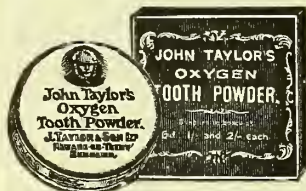
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126/128 Bristol Street, BIRMINGHAM.

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JOHN TAYLOR'S TOILET PREPARATIONS.



JOHN TAYLOR'S OXYGEN TOOTH POWDER

Send an order for 3 dozen 6d. Oxygen Tooth Powder and we will send you One dozen free and three tins of Talcum.

NOTE—	YOU PAY FOR 3 doz. 6d. Oxygen Tooth Powder @ 3/6 = 10/6		£	s.	d.
	YOU SELL 4 doz. 6d.		@ 6d. =	:	1 4 0
	3 tins 1/- Talcum Powder @ 10d. =		:	:	0 2 6
					1 6 6
			Cost		0 10 6
SHOWING A PROFIT OF 16/- ON AN OUTLAY OF			10/6		0 16 0

SHOWING A PROFIT OF 16/- ON AN OUTLAY OF 10/6

YOUR REPEAT ORDERS ON THESE LINES WILL ASTOUND YOU.

Testimonials from Chemists all over the World.

Send Postcard to London Depot and Wholesale Distributing Agents—

J. C. GAMBLE & CO., 20 LITTLE BRITAIN, E.C.

HAVE YOU TRIED OUR . .

"New Process"

OTTO OF ROSE

Distilled under vacuo, eliminating inodorous
 :: Stearoptine to a large extent ::

WRITE FOR QUOTATIONS.

THE LONDON ESSENCE CO.,
 George St., Camberwell Green, LONDON, S.E.



Petroleum

Jellies

(B.P. and Technical Qualities)

White, Cream, Yellow, Orange, Pale Yellow, &c.

White Oils

(B.P. and Technical qualities)

White and half-white Oils, odourless, tasteless, bloomless.

Coloured Oils :

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The Stern Sonneborn Oil Co., Ltd.

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AWARD, LONDON, 1881,
For "EXCELLENCE OF QUALITY."

KEEN BUYERS LOOKING FOR BEST VALUE

COD LIVER OIL EMULSION (ABSOLUTELY INSEPARABLE)

Made from a new and greatly improved base, and similar products, Spot or Forward delivery—in Bulk or Bottle—should apply to

H.E. Stevenson & Co.

WHOLESALE EXPORT DRUGGISTS
and MANUFACTURING CHEMISTS,

122 Great Suffolk Street, London, S.E.

For many years a Director of Baiss Brothers & Stevenson, Ltd.

Telephone No.:
1831 HOP.

Telegraphic Address:
EKLIPS LONDON.

**Salrado
Compound.**

**BISURATED
MAGNESIA.**

Retail, 1/9.
Trade, 17/- per doz.

**HARRIETT META'S
GOLD MEDAL HAIR TONIC.**

Retail, 2/11.
Trade, 26/- per doz.

**Sulthine
Concentrate.**

**Lavona
de Composee**

← ALL SELLERS →

**Flowers
of Oxzoin.**

*TO-KALON Guarantee.
Extensively Advertised.
No Risk. Good Profits.*

SALE GUARANTEED

by the

TO-KALON Manufacturing Co., Ltd.

To-Kalon House, Great Portland St., London, W.

"DAMSCHINSKY'S" American Liquid Hair Dye

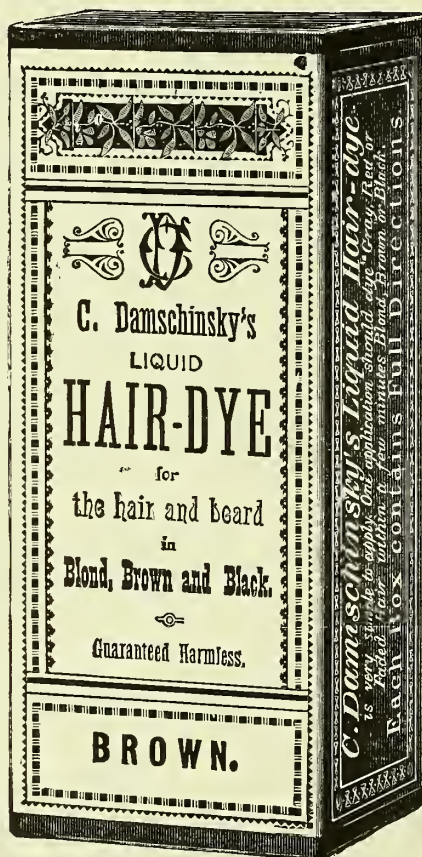
ONE PREPARATION.

FOR THE HAIR & BEARD (in Three Shades),
BLONDE, BROWN, & BLACK.

It contains no injurious substance. Dyes the Hair, whether grey or red, to any colour—from the finest blonde to the deepest black. It is efficacious and reliable. The oftener the colour is used, the darker becomes the shade of hair—so that the original colour of hair may be retained. It is a Dye, not a bleach. Will not give dark hair a light shade.



For orders of not less than 6 dozen, we give 1,000 Counter Bills with customer's own name and address as agent.



For quantities of not less than 2 gross, we print customer's own name and address on labels as agent.



PRICES :

1/3 Size :

9/- per Doz.

2/- Size :

12/6 per Doz.

CERTIFICATE.

This is to certify that I have examined C. DAMSCHINSKY'S LIQUID HAIR DYE, and find it to be free from all substances which might have an injurious effect, provided that the directions be adhered to. Especially is this preparation free from salts of lead and silver.

Dr. M. Hasenclever,

Wall Street, New York.

Analytical Chemist.

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SPONGES & LOOFAHS

International Sponge Importers, Limited,

CRESSWELL BROTHERS & SCHMITZ

Sponge Importers, Exporters, and Merchants, and Chamois Leather Dressers,

BRANCH.

18 & 19 RED LION SQUARE, New Warehouses and Steam Bleacheries, LONDON, W.C.

45 1/2 EAGLE STREET.

LARGEST SPONGE WAREHOUSES IN THE WORLD.

We now have on show at our extensive warehouses the largest and best selections of original cases—Honeycomb and Fine Turkey, suitable for Home and Colonial Druggists. Buyers are invited to Call to Inspect our Magnificent Stocks and make their own selections. Lowest Market Prices. Absolutely Best Values. The following abridged List will serve as a guide to Buyers when writing.

UNBLEACHED MEDITERRANEAN 'SPONGES IN ORIGINAL CASES.

HONEYCOMB.	HONEYCOMB.	FINE TURKEY CUPS	FINE TURKEY SOLIDS.
Toilet & Bath. 1st and 2nd Qualities.	3rd Shape, Toilet & Bath. Largest Sponges obtainable at the prices.	1st Quality. PICKED SHAPES.	1st Quality. SELECTED SHAPES.
Pieces Average in Price per Case. Piece.	Pieces Average in Price per Case. Piece.	Pieces Price in per Case. Piece.	Pieces Average in Price per Case. Piece.
300 at 4d.	330 at 2 1/2d.	Toilet Selected 300 at 1/-	Nursery 400 at 3d.
270 " 6d.	280 " 4 1/2d.	" 250 " 1/3	" 300 " 4d.
200 " 8d.	300 " 3 1/2d.	" 200 " 1/6	" 200 " 6d.
180 " 9d.	200 " 8d.	" 175 " 1/9	" 200 " 8d.
170 " 1/-	180 " 9d.	" 150 " 2/-	" 200 " 1/-
160 " 1 1/2	160 " 1/-	" 140 " 2/6	Toilet 150 " 1/6
160 " 1 1/6	140 " 2/6	" 100 " 3/-	" 100 " 1/9
150 " 1/9	125 " 3/-	" 90 " 3/6	" 100 " 2/-
140 " 2/-	110 " 3/6	" 80 " 4/-	" 80 " 2/6
140 " 2/6	95 " 4/-	" 70 " 4/6	" 50 " 3/-
125 " 3/-	90 " 4/6	" 60 " 5/-	" 36 " 4/-
110 " 3/6	80 " 5/-	Bath Selected 45 " 6/6	" 24 " 5/-
95 " 4/-	60 " 3/-	" 50 " 6/-	
90 " 4/6	45 " 4/6		
80 " 5/-	30 " 5/-		
75 " 5/6			
70 " 6/6			

The above Goods can be had in smaller quantities, or in repacked Cases to suit Buyers' own requirements.

LOOSE GOODS DEPARTMENT. Where Honeycomb, Turkey, and Cuban Sponges—Bleached or Unbleached—are sold in smaller quantities, to suit customers' requirements. Large and varied selections always on show at lowest market prices.

CARDED SPONGES.

Fresh Line, mounted on Handsome Blue Card of New Design.

We originated the Carding of Sponges, and continue to supply the best goods on the market.

HONEYCOMB AND TURKEY.			
SCHOOL, retail 1d., 2 doz. on card, per gross	3/6	TOILET, retail 1/6, 1 doz. on card, per gross	120/-
" 1d., 1 " " " " " " "	7/-	" 2/-, 1 " " " " " " "	168/-
TOILET " 2d., 1 " " " " " " "	14/-	" 2/6, 1 " " " " " " "	206/-
" 3d., 1 " " " " " " "	20/-	" 3/-, 1 " " " " " " "	246/-
" 4d., 1 " " " " " " "	27/-	BATH " 4/-, 1 " " " " " " "	288/-
" 6d., 1 " " " " " " "	40/-		
" 1/-, 1 " " " " " " "	84/-		

DOMESTIC CARDED SPONGES. New Line.

Larger than Turkey.		Soft in use.	
TOILET, retail 3d., 1 doz. on card, per gross	18/-	TOILET, retail 1/6, 1 doz. on card, per gross	72/-
" 4d., 1 " " " " " " "	24/-	" 2/6, 1 " " " " " " "	108/-
" 6d., 1 " " " " " " "	36/-	" 3/-, 1 " " " " " " "	144/-
" 9d., 1 " " " " " " "	54/-	" 4/-, 1 " " " " " " "	180/-

Special Quotations for Wholesale Quantities of Carded Goods.

SPECIAL NEW LINES OF THE SEASON.
SPONGES in Fancy Card Boxes for Counter Display.
SELECTED FINE CUBAN.—For Nursery and Toilet uses.

Per Box.		Per Box.	
A.A. Round Solids, containing 24 pieces, 1 1/6	1 1/6	D. Round Solids, containing 12 pieces, 4 6	4 6
A. " " " " 12 " 1 1/6	1 1/6	E1. " " " " 12 " 1 1/6	1 1/6
B. " " " " 12 " 2 6	2 6	E2. " " " " 12 " 2 6	2 6
C. " " " " 12 " 3 6	3 6	E3. " " " " 12 " 3 6	3 6

SPECIAL LINE CHEAP CUBAN.

Half forms, large sponge for money.

HC 1. Half Shapes, 8 dozen in Box	12/-
" 2. " " " " 5 " "	12/6
" 3. " " " " 3 " "	10/6

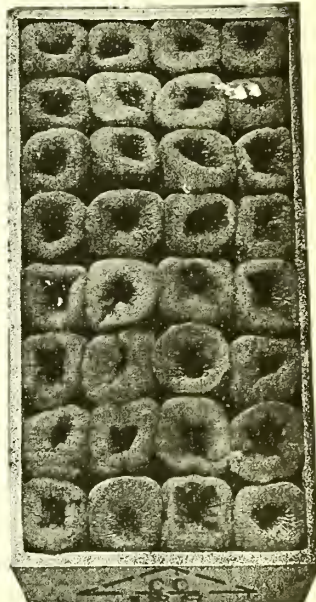
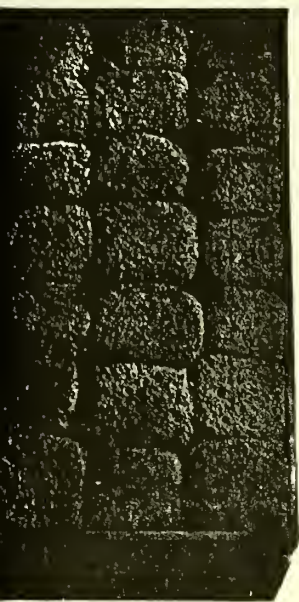
LOOFAHS (Vegetable Sponge).

In original compressed bales, as imported from Japan.

Size 8 by 10 inches, about 5,000 pieces in Bale	Size 14 by 16 inches, about 2,500 pieces in Bale
" 10 " 12 " " " 4,500 " "	" 16 " 18 " " " 1,800 " "
" 12 " 14 " " " 3,500 " "	" 18 inches and upwards, about 1,200 " "

We will send lowest prices on application.

Prices for Loofahs swollen out and ready for sale at per gross:
9/-, 12/-, 18/-, 24/-, 30/-, 36/-, 42/-



Krüschen Salts

DURING the last few years the increase in the popularity of Krüschen Salts has been vast—and the present demand for this famous home remedy is greater than ever. A diuretic aperient, a natural solvent of uric acid, possessing great tonic properties, Krüschen Salts has for long been advocated by medical men. It affords a simple, safe and efficient corrective for Constipation, Liver and Kidney troubles, Rheumatism and Gout. It cleanses the system, stimulates the organs, and engenders a glow of renewed vitality.

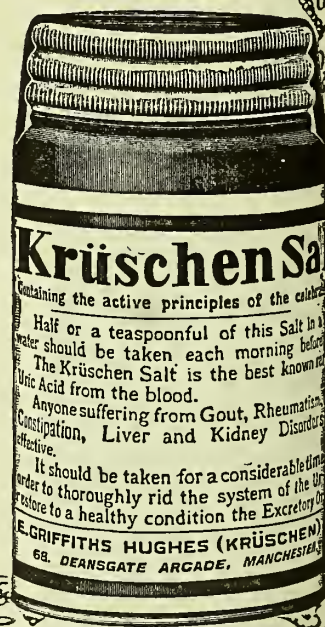
Chemists and Druggists who would anticipate the requirements of customers should bear these facts in mind; a large stock of Krüschen Salts will be found needful to avoid a constant replenishing of supplies.

Liebig's analysis of Krüschen Salts: Soda Sulph., Soda Chlorid., Soda Phosph., Magnes. Sulph., Magnes. Chlorid., Potas. Sulph., Potas. Chlorid.

Wholesale Price: Per dozen bottles 13/6 nett (P.A.T.A. conditions). Retail Price: 1/6 per bottle.

E. Griffiths Hughes (Krüschen), Ltd.,
68 Deansgate Arcade, MANCHESTER.

Reduced facsimile.



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Telephones: City 640, 641, 642, 643.

Telegrams "YALCRAB LONDON."

MANUFACTURING and WHOLESALE CHEMISTS.

Druggists' Sundries. Wines (Medicated and otherwise—List sent on application). Packed Pharmaceuticals. Perfumes and Essential Oils. Patent Medicines. Toilet Preparations. Prepared Foods. Photographic Plates, Papers, &c.

ORDERS DESPATCHED WITH THE GREATEST PROMPTITUDE.

95 Farringdon St., LONDON, E.C.

A PROFITABLE PROPOSITION
FOR THE PHARMACIST!!

MALT-GLIDINE

(WITH LECITHIN)

A POWERFUL NERVE FOOD-TONIC.

MALT-GLIDINE OFFERS THE
FOLLOWING ADVANTAGES:

SEND A
POSTCARD
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SPECIAL
WINDOW-DISPLAY
TERMS.

- ¶ Large Profit on Small Outlay.
- ¶ Prices are Protected.
- ¶ Permanent Demand where introduced.

The formula of Malt-Glidine is **unique**. It contains 6% of Lecithin in addition to 5% Phosphoric and other Reconstituent Salts, 18% Natural Fats, 37% Unimpaired Vegetable Protein, and 34% Malted Carbohydrates.

1/3 & 2/9 PER TIN. 10/- & 22/6 PER DOZ.
MINIMUM PRICE ... 1/2 & 2/6 PER TIN.

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GOOD! IT'S MASON'S

The Drink for the Masses

Millions of glasses used daily
by workers all over the Empire

Please allow us to Sample and Quote—



Citrate Magnesia
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Lemonade
Crystals, &c.

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Lofthouse & Saltmer, Ltd.

—Wholesale and Export Drug—
Merchants, Manufacturing Chemists,
HULL,

invite the attention of the Trade to the following well-ried preparations, which carry a big P.A.T.A. retail protected profit, and are well known and valued by the public in many parts of the country.

Losall's Asthma Remedy. } PROTECTED
Very effective Remedy for Asthma, Bron- } RETAIL DOZ.
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Losall's Salt. } 6d. 3/6
The popular remedy for Eczema, Gout, } 1/- 7/-
Rheumatism, and Biliousness. Well } 1/6 10/6
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Losall's Compound Sulphur Soap. } 1/- 8/-
A valuable emollient medicated Skin }
Soap, especially for use in Eczema cases. }

Prepared Barley ("CROWN"). } 4/-
Usual 1/- size, lever lid tins, for children }
and invalids. } BRAND

Malted Food. } 4/6
Usual 1/- size, lever lid tins, name and }
address free on 3 dozen. Special design }
label with name and address on gross }
orders, if desired. }

London Agents: F. NEWBURY & SONS, Ltd.

HORLICK'S MALTED MILK

(In Powder Form).

No Cooking. Prepared instantly by stirring
vigorously in water, hot or cold.

THE FOOD that BRINGS RESULTS

The first thought of experienced dietitians when selecting a palatable, nourishing, easily assimilated food.

¶ The wholesome, invigorating principles of pure milk and choice malted grain, so prepared as to be properly assimilated in the feeblest conditions.

¶ Used more extensively every year in the feeding of infants and as a supplementary nutrient for growing children. Also with increasing confidence by adults as a table beverage in the home—superior to tea or coffee at meals—and an efficient corrective of insomnia taken hot before retiring.

Endorsed by the Medical Profession.
Recommended and sold by all Chemists, in three sizes: 1/6, 2/6 and 11/-

ADVERTISING MATTER PREPAID ON REQUEST.

Horlick's Malted Milk Co.
SLOUGH, BUCKS.

Our new Poster for

"FIVE BARKS JUBES"

depicts a typical Dutch Scene in Winter.



NEW POSTER, 1912.

The title "Five Barks Jubes" is our registered trade mark, and we shall be glad if our friends will kindly report to us any infringement.

4-lb. (enamelled boxes) 9d. lb. net.

7-lb. tins, 8½d. lb. net.

3½d. boxes (4 oz.), 2/6 dozen.

A smart Poster in 6 Colours sent with all Orders.

The work has been specially designed by Mr. Geo. A. BODEN, a pupil of the celebrated Poster Artist, Mr. HASSALL, and is certainly very original and striking.

Notwithstanding the many numerous imitations that appear and then die an inglorious death, the sale of Five Barks Jubes increases yearly.

Based on merit and originality, and backed by smart advertising Posters and Showcards, Five Barks Jubes have the largest sale of any Cough Jube in the United Kingdom.



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The widely advertised remedy
that makes thin people plump.

Popular and Attractive.



STEADILY ADVERTISED.

STEADILY IN DEMAND.

More Customers and extra
profits if you stock Sargol.

4/6 size 43/- per doz.
2/6 size 24/- per doz.

Beautiful showcards and booklets sent free on
request. Write to-day for a supply—they will
give your shop a good up-to-date appearance.

**THE SARGOL CO., 124 HOLBORN,
LONDON, E.C.**

Big Profits and big Sales

Freeman's Chlorodyne gives you a good profit, and
is a steady all-the-year-round seller.

For Colic, Cholera, Dysentery, Diarrhoea, and
allied tropical complaints, it is an established and
recognised specific. Extensively used by the
Faculty for nearly 70 years.

FREEMAN'S ORIGINAL CHLORODYNE

1/1, 2/9, and 4/6 per bottle. P.A.T.A.I. prices to
Home Trade—9/3, 24/- & 40/- per doz. Specially
favourable export terms on request.

Write to-day for our new pictorial showcard,
and a supply of advertising literature, printed in
English, French, German, Dutch, Portuguese,
Spanish, Arabic, Chinese, Japanese, and Indian.
FREEMAN'S CHLORODYNE Ltd., London, S.E., Eng.



The Chemists' & Druggists' Diary, 1913, IS NOW BEING PREPARED FOR PRESS.

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Owing to the immense amount of recent work calling for notice, it has been necessary to divide the work into Two Volumes.

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Principals: { HENRY WOOTTON, B.Sc. (Lond.)
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EVENING CLASSES (MINOR and MAJOR). Fee from 1 guinea per term.

JANUARY to JULY, 1912, Pharmaceutical Passes 62; this number includes only those who have passed after a personal course at the College and not correspondence students.

A larger number of Students have passed the Pharmaceutical Examinations from the London College since its establishment than from any other School.

For Prospectus, &c., apply to The Secretary, LONDON COLLEGE OF CHEMISTRY AND PHARMACY, 361 Clapham Road, London, S.W.

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(Founded by GEO. CLAYTON, F.C.S., in 1890.)

PRINCIPAL - E. G. BRYANT, F.C.S., Pharmaceutical Chemist,
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South of England College of Pharmacy.

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Principal—H. LUCAS, Ph.C., F.C.S.

Assistant Masters—H. E. ARCHER, Ph.C.; R. N. ASTON, M.P.S.

Examination Results, July 1912? Passes 20.

MAJORS 4; MINORS 13; APOTHECARIES' HALL 3; OVER 50% PASSED AT THEIR FIRST ATTEMPT.

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A New Term for Minors (Day Classes) commences September 26th preparing for January and April Examinations, starting at the foundation of each subject. Fees 8 and 16i guineas.

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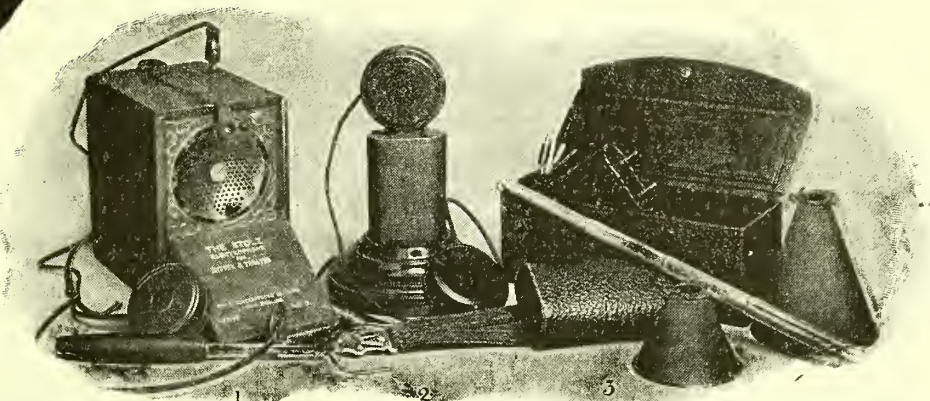
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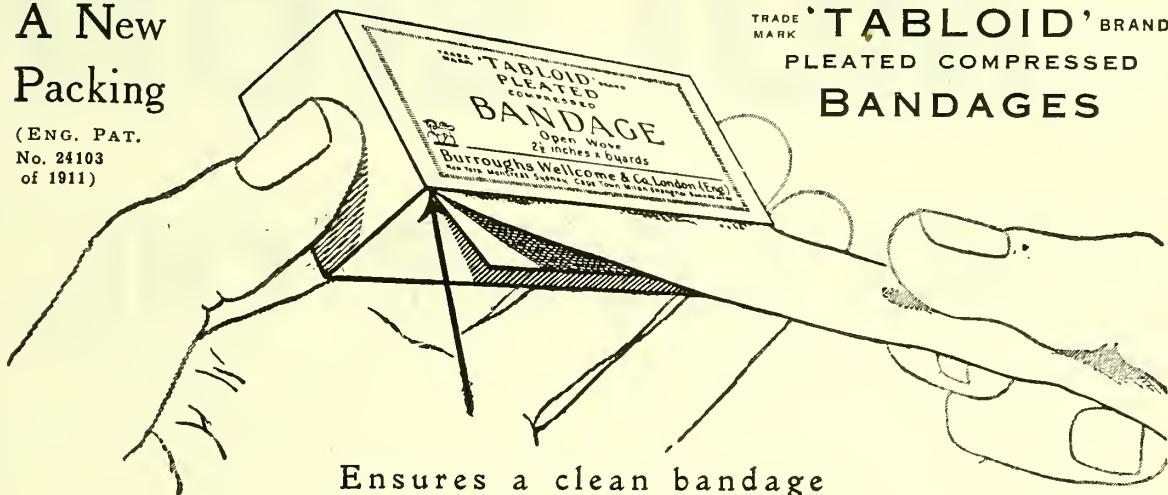
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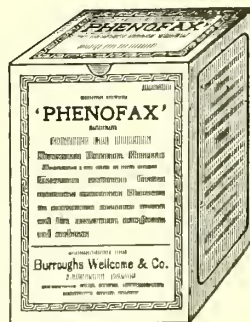
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DIARY PREPARATION.

Subscribers to THE CHEMIST AND DRUGGIST in business in far-off parts of the world like to have their annual *Chemists' and Druggists' Diary* to begin the New Year with. In order to ensure this the *Diary* must be put to press at the end of October and despatched by the mails leaving London early in November. The Publisher desires to remind advertisers, therefore, that the preparation for

The Chemists' and Druggists' Diary, 1913,

has already begun, and he would appreciate their co-operation and assistance in sending in copy and instructions for their announcements now.

SUMMARY OF THIS ISSUE.

The more notable items only are dealt with.

C. & D. Diary, 1913.

Subscribers who desire to secure exemption from stamp-duty for any medicinal preparations on the ground that they are known, admitted, and approved remedies should send us the formulas for publication in the *C. & D. Diary*, 1913, now in preparation.

Congress of Applied Chemistry.

We continue our special reports of this International Congress now being held in New York.

The Pharmaceutical Chemistry Section is presided over by Professor Remington, and the practical work began on September 6 with the report of the Commission on variation in the activity of toxic drugs (p. 41).

This was followed with a communication by Messrs. Ransom and Henderson (Hitchin) on the effects of cultivation and fertilisers on the growth of belladonna and on its alkaloidal content (p. 53).

A paper on the same subject was also communicated by Mr. F. H. Carr (Dartford), and digitalis, the daturas, and American cannabis were similarly treated by American workers (pp. 41-43).

The Section recommend the reappointment of the International Commission (p. 44).

In the same Section on Monday papers were read on the unification of tests for valuing essential oils, the chief one being by Messrs. John C. Umney and E. J. Parry (p. 55). These led to the appointment of an International Committee of expert chemists to deal with the subject (p. 44).

Articles and News.

Meetings of three South African pharmaceutical societies are reported on p. 38.

A certificate is now offered to dental chemists. See the facsimile on p. 58.

Several provincial firms of methylators and drysalters are amalgamating into a company (p. 39).

The export and import trade of the United Kingdom last month was unprecedentedly good. See the article on p. 51.

An advertising "ear-specialist" has had to refund money to a man whom he failed to cure under guarantee (p. 35).

Although the weather is brighter and autumnal, the Winter Session of Chemists' Associations has begun (p. 59).

Our correspondence pages contain several exceptionally pertinent letters which invite reflection and response (pp. 65-67).

The importance of sterilising dental forceps before use has been enjoined at a Coroner's inquest, where a chemist was reprimanded (p. 35).

An amendment of the Leeward Islands law dealing with the sale of medicines extends greatly the number of medicines which may be sold by unlicensed persons (p. 51).

The official Irish regulations under the Poisons and Pharmacy Act, 1908, have been officially published. These require poison-bottles for mineral acids and liquid ammonia (p. 36).

The Pharmaceutical Committee on Health Insurance met in London this week, and passed resolutions regarding dispensing charges and tuberculosis dispensaries (p. 56).

The British Association meeting in Dundee has been most successful. We give notes about it, with a portrait of Professor Alfred Senior, President of the Chemical Section, as well as notes on Mr. H. S. Wellcome's lecture on his remarkable anthropological discoveries in Southern Sudan (pp. 45-47).

Trade and Market Matters.

The Sicilian market for lemon oil is very firm, and yet higher prices are expected to rule for the new crop, for reasons given on page 50.

The market features this week are the advancing prices of chemicals, including arsenic, ammon. chlor., calcium chloride, copper sulphate, lead compounds, and potassium prussiate. Quinine (seconds), glucose, copaiba, cubeb oil, and Cochin ginger are all easier. Emetine hydrochlor. is dearer (p. 61).

ENGLISH AND WELSH NEWS.

When sending newspapers to the Editor please mark the items of news to which you desire to call his attention.

Brevities.

The Bath City Council on September 10 decided to adopt the principle of leasing the bathing establishment to a syndicate.

Three platinum dishes, weighing 32, 39, and 61 grams respectively, have been stolen from the Science and Art School, Chelmsford.

At Brighton on September 10, the off-licence at 140A Western Road was transferred to Mr. Oscar Dewhirst Holmes, chemist and druggist.

The name of the bridge which was broken down by the East Anglian floods is Lakenham Bridge. The photograph we reproduced of it last week was taken by Mrs. Swain, St. Giles Street, Norwich.

A fire occurred during the night of September 10 at the back of the premises of Mr. H. Havelock Denton, chemist and druggist, Bridge Street, Blyth, but it was subdued before any serious damage had been done.

Messrs. Alfred Edmund Horsnail and Headley Horsnail (trading as Horsnail & Reynolds), corn and seed merchants, 13 and 15 High Street, Strood Intra, Rochester, have applied to the Town Council for a poison-licence.

Messrs. Brunner, Mond & Co. intend to erect a number of model dwellings for their workers on garden-city principles on their estates in the Northwich district. The shortage of suitable dwellings has made it difficult to get workmen, and as a temporary expedient 100 dormitories and fifty bungalows for married men are to be erected at Winnington.

Miss Felix, headmistress of Mold Council Infants' School, while returning home on the top of a motor-bus with her brother, Mr. D. L. Felix, chemist and druggist, Mold, was hit on her chin by a slug accidentally discharged from an air-gun in the possession of two youths near the spot. The bullet has been extracted, and Miss Felix is now progressing favourably.

The Home Secretary has received from the National League for Physical Education and Improvement, of which Bishop Boyd-Carpenter is the chairman, an extensively signed petition on the subject of the dangers attending the use of flannelette to child-life. Mr. McKenna has also been asked to receive a deputation from the supporters of the League, and this may take place soon after the re-assembling of Parliament next month.

"W. Purton, Westfield Villa, Southlands Road, Bromley, Kent," sent an order last week to Ilfracombe, which included "2 boxes of Wright's coal-tar soap, 1 tin of Zam-Buk, one bottle of brilliantine, and a box of cough-lozenges, with bill." A similar card has come to us from Llanidloes. No attention should be paid to the postcards on which such orders are given. It is mere waste of time and money to tell the man that he will get the goods when he sends the money.

The Postmaster-General has arranged for a single certificate of posting to cover any number of postal packets of the same kind if these are presented for posting at the same time and accompanied by a list of the names and addresses thereon. Postage-stamps to the value of $\frac{1}{2}d.$ for each packet has to be attached to the form of certificate. This innovation is an extension of the halfpenny certificate of posting for letters, etc., not sufficiently valuable to be sent by registered post, which was instituted last October.

The employés of Boulton Macro, Ltd., Crayford Mills, Stratford, had their annual outing on Saturday, September 7. The party, numbering about forty, entrained at the District Railway Station, Bow, for Ruislip, which was reached about 10.30. During the morning a cricket match was played, in which the directors and departmental managers took part. After dinner at King's End

Farm, a programme of sports was carried out, the prizes being distributed during tea. Music and dancing brought a very pleasant day to a close, the party reaching home about ten o'clock.

The Institute of Chemistry, 30 Bloomsbury Square, London, W.C., has published a list of contributors to its Buildings Fund during the last three years up to July 22, when the fund amounted to 10,292*l.* 0*s.* 3*d.* (including 347*l.* 8*s.* 3*d.* interest), thus leaving about 5,000*l.* of the total 15,000*l.* required still to be collected. A further special appeal is being made to companies and firms and others interested in the promotion of higher education in chemistry and allied sciences. The Council intend to select a site and prepare plans for their new home at the close of this year, and are desirous of raising the full amount required before the end of October.

Pellagra.

During 1911 Dr. Louis W. Sambon, Lecturer to the London School of Tropical Medicine and Parasitologist to the Wellcome Research Laboratories, visited the best known pellagra centres in Roumania, Transylvania, the Austrian Tyrol, the French Landes, and Spain. On his travels he collected much confirmatory evidence of his theory arrived at during his researches in Italy as Chief of the Pellagra Field Commission that the disease is propagated through the agency of a small biting-fly belonging to the family *Simuliidae*, and not by unsound maize. The funds for the first researches were provided by the Pellagra Investigation Committee, but subsequently they have been defrayed entirely by Mr. Henry S. Wellcome.

Public Dispensing.

The Strood (Kent) Guardians are fitting up a dispensary at the workhouse, and at the meeting on September 5 the medical officer (Dr. F. Cowan) recommended the purchase of the necessary drugs from two wholesale firms in London. Mr. W. J. Wenborn moved that local chemists be also asked to tender, but the motion was lost. Dr. Cowan, in answer to Mr. Wenborn, said he thought his proposal much the better one, as there is a great variety of drugs required. However, the medical officer admitted that this is not too great for a chemist to supply. Dr. Cowan thought the local supply might be considered when stocks require replenishing.

The Merthyr Tydfil (Glam.) Guardians had before them recently the recommendation of the House Management Committee "that a qualified dispenser be advertised for at a salary of 30*l.* a year." Mr. W. Harris inquired who would take the post for 30*l.* He moved that the report be referred back. It meant that the chemists in the town would apply for the appointment. He considered that a nurse should be trained to do the work. Qualified chemists had told him that ordinary persons should be able to dispense after six months' training, and surely a nurse would be able to do it after three months' tuition. The Clerk said a dispenser would be employed two hours a day. Mr. David Evans said that for years the nurses had been able to do the work. A submission that the salary be fixed at 52*l.* was not seconded. Ultimately the recommendation was referred back to the committee.

Analysts' Affairs.

In the city of Bristol last quarter four samples of glycerin, two of olive oil, and one of sulphur tablets were examined and found to be genuine.

The 297 samples examined by the Islington analyst (Dr. F. L. Teed) during the second quarter of 1912 included five each of cod-liver oil, tincture of quinine, and almond oil, seven each of pepper and malt vinegar, and four of mustard. All the latter were genuine except a tincture-of-quinine sample, which proved to be ammoniated tincture of quinine (and was so labelled), and an almond-oil sample, which consisted of peach-kernel oil. Proceedings against the vendor of the former were dismissed with 3*l.* 3*s.* costs, while the retailer of the adulterated almond oil was fined 3*l.*, and 2*l.* 2*s.* costs, or, in default, to undergo one month's imprisonment.

Contracts.

Chorley Town Council.—United Alkali Co., Ltd., for chloride of lime.

Swaffham Guardians.—Mr. F. W. Cooper, chemist, Swaffham, for disinfectants.

Bootle (Cumberland) Guardians.—Mr. F. S. Dixon, chemist, Millom, for bovril.

Cranbrook Guardians.—Mr. A. J. Gray, chemist, Hawk-hurst, for medical appliances.

Bedford Guardians.—Mr. J. H. Lloyd, Bedford, appointed chemist to the workhouse for six months.

Sudbury (Suffolk).—Mr. W. S. H. Brampton, chemist, Sudbury, has received the contract for the supply of drugs to the workhouse.

High Wycombe Guardians.—Lansdale & Co., chemists, High Wycombe, for cod-liver oil and quinine. The Sanitas Co., Ltd., for disinfectants.

Salford Town Council.—Higginbottom & Co., Manchester, for the supply and delivery of 15 or 16 tons of dirty copperas at 17s. per ton.

Strood (Kent) Guardians.—The Sanitas Co., Ltd., sanitas soap, No. 2, at 21s. 9d. per cwt.; soap, carbolic (sanitas No. 2), at 18s. 6d. per cwt.; sanitas disinfectant fluid at 9s. 6d. per dozen pint bottles; and sanitas soldis at 5s. per dozen pint tins.

Birmingham Notes.

Another optician's establishment has opened its doors in Temple Row, near the Arcades.

The people of Bearwood complain of the telephone service, which is served from the chemist's shop, because they are not able at all times to have access to the instrument. Another result of the Shops Act!

The death is announced of the Vice-Chancellor of the Birmingham University (Alderman C. G. Beale), one of Birmingham's worthiest sons. He was a great benefactor to the town and its University, to the latter of which he subscribed over 8,000l. to its funds.

A startling accident occurred in Great Hampton Street, Birmingham, on Friday morning, at the premises of Messrs. Canning & Co., chemists and drysalters, which are being rebuilt. A crane fell 60 ft., and although many men were at work on the premises at the time, none were seriously injured.

Miss Nora I. Chaloner, daughter of Mr. H. Chaloner, pharmacist, who now conducts the business of the late Mr. J. J. Horton, Stratford Road, Birmingham, has been elected to a City scholarship in the Birmingham University. Miss Chaloner has been very successful during her scholastic career, having obtained among other honours the King Edward's Minor scholarship, King Edward's Major scholarship, Staffordshire County Council Intermediate scholarship, and King Edward's leaving exhibition. She matriculated in 1910 and passed the Intermediate Arts examination in July last.

Sunday Trading.

Hull is said to be the only place in the United Kingdom where the prosecution of Sunday traders is persisted in all the year round. The number of summonses issued for Sunday trading during 1911 reached the maximum figure of 4,873.

The Blackburn Chamber of Commerce considered a letter from the local Tradesmen's Association asking the Chamber to use its influence against Sunday trading. One shop in every five is open on Sundays. Sir H. F. Hibbert said the matter was one for the Corporation to deal with, and Mr. R. Lord Gifford, Ph.C., said that many of the shops opened for purposes which were vicious.

Sepsis from Tooth Extraction.

At the Bethnal Green Coroner's Court on September 9, Dr. R. L. Guthrie, the Deputy-Coroner, inquired into the death of Esther Mead (22), collar machinist, of 15 St. Andrew Street, Bethnal Green. Deceased while on holiday at Margate had a tooth extracted by a chemist. On the following day her mouth started to swell, and she was treated by a local doctor for some days, who eventually advised her to go home. After arriving in London, Mead was attended by another doctor, then treated at a dis-

pensary and a London hospital. At the last institution another tooth was removed, but as there was no bed she had to be sent away, and eventually went to the Bethnal Green Infirmary. By this time her mouth had become in a terrible state, mouth lotions and gargles having to be used continuously. Deceased was discharged on September 2 at her own request. She died three days later. Geo. Towler, bookbinder, deceased's sweetheart, said that the chemist, after a lot of trouble, took a portion of a tooth out, saying the little bit of stump left would not matter as there was an abscess, and on this bursting the stump would come away. In all about a dozen instruments were used. These were taken out of brown paper, and not cleaned in any way before use. Mr. Arthur Wm. Heaver, chemist, and manager to Mr. V. J. Woods, chemist and druggist, at his branch at 1 Tivoli Road, Margate, said he had been registered as a chemist for twenty-nine years. He had no very clear recollection of the lady, but thought he drew a very bad molar. It was quite untrue to say that the instruments were kept in brown paper—they were always in chamois leather; but he could not say as to whether he cleaned the instruments before use or not. Sometimes he did, and sometimes he did not, but, of course, it would be usual to do so. Any instrument he used would not be used again until it had been put in boiling carbolic by him. A Juror: "That would be no use; they might not be used for a month, as he is a chemist and not a dentist, and therefore would be dirty. Have you taken out any teeth since?" Witness: "Oh, yes." The Juror: "Have you disinfected the instruments?" Witness: "In all probability many times." The Coroner: "Have you had much experience in dentistry?" Witness: "Yes, for the past ten years." Dr. Jenkins said he attended the deceased before she went into the infirmary and after she came out. Death was due to blood-poisoning consequent upon the mortification of the mouth. It was quite possible the septic condition was there before she went to have the tooth drawn, and the drawing of the tooth only "lighted things up." The Coroner said the doctor who attended deceased when in Margate had written to say that in his opinion the poisoned condition was present before the tooth was extracted. In summing up, the Coroner said: "The question is, How did the mortification come about? Had there been negligence? If so, was it sufficient to send the chemist for trial on a charge of causing deceased's death? It had to be gross negligence to do that. It was obvious that the precautions taken by the chemist were useless. The instruments ought to have been cleaned, but that was not done until after they had been used." The jury returned a verdict in accordance with the medical evidence, and added that the chemist should be censured for not having kept his instruments clean. The Coroner: "I quite agree with the verdict. In taking out teeth great cleanliness should be displayed, and in future you should see that your instruments are aseptic and antiseptic. They say you are deserving of considerable censure, but will go no further." Mr. Heaver: "Your instructions shall be carried out. I should like to say—" The Coroner: "That will do; we want to hear no more."

From Various Courts.

At Dartford on September 5, Arthur Augustus de Lisle was sentenced to one month's hard labour for fraud. Accused, who, posing as traveller for "The Amalgamated Drug-stores," of Liverpool, obtained beard and lodging for which he never paid.

At Margate on September 2, Henry Russell Sanford, Broadstairs, was fined 2l., with 5l. 12s. 6d. costs, for unlawfully laying poisoned flesh. The evidence showed that defendant asked Mr. Julian Horrell, chemist and druggist, Broadstairs, for some strychnine to destroy a cat. As Mr. Horrell never supplies strychnine to anyone, he suggested Battle's vermin-killer, a threepenny packet being purchased and the poisons register being signed. A warning was also given as to exercising care in using the poison.

At the Edmonton County Court on September 6, Judge Tindal Atkinson, on the application of George Davey, an advertising and bill-posting contractor, Dalston,

granted an interim injunction restraining Mr. Campbell, chemist, Boleyn Road, Kingsland, from tearing off, defacing, and obliterating bills on a wall at the corner of Boleyn and Pellerin Roads, Kingsland, which plaintiff hires from the freeholder at a rental of 5s. a week as a posting station. The defendant, it is said, claims the wall as his, and had posted on it "Wait-and-See Liver Pill" bills. The defendant did not appear. An action is pending in which Mr. Davey claims damages against Mr. Campbell, and asks for a perpetual injunction.

At Cheltenham on September 5, Henry G. Woodliffe, chemist and druggist, Charlton Kings, was charged with attempting to commit suicide by taking prussic acid. Accused was found unconscious in a chair with a bottle containing prussic acid in his hand. The defence was that prisoner had taken alcoholic stimulants too freely, and had taken the acid to make himself sober. The Chairman said that the Bench had come to the conclusion that although they thought the police were justified in bringing the case forward, it was not one that would carry conviction before a jury. At the same time he would say that prisoner's conduct had been extremely rash, and he hoped prisoner would be more careful in future. As a chemist he knew the danger of using such drugs.

At Portsmouth on September 7, William Wallis Cox (36) was charged with obtaining 2s. by false pretences from Eliza Binsteed, general dealer, 275 Somers Road, Southsea. Detective Bowyer, who gave evidence, produced a pile of cards with small pill-boxes affixed thereto labelled "Tasteless Little Liver-pills," "Pearl-coated Stomach-pills." On the boxes themselves were printed "Guinea a Box Pills: Take one at bedtime." It was alleged that accused, who had represented to Mrs. Binsteed on various occasions that he was an agent for "Ford and Beechum" liver-pills, sold complainant on August 24 two cards of "head and stomach" and "little liver" pills for 2s. These were placed in the window, but none were sold. On the following Tuesday complainant, who felt unwell, thought she would take two of the pills, but on opening a box she found the supposed pills consisted of peas such as are used in pigeons' food. Prisoner was remanded on bail of two sureties of 20l. each.

At the Ashford (Kent) County Court on September 9, Thomas Noakes, ex-police superintendent, Ashford, sued Edward Shirley, who described himself as an ear specialist, of 6 Great James Street, Bedford Row, London, W.C., for 1l. 11s. 6d. for return of money sent. Complainant had replied to an advertisement, and asked for a free trial of defendant's system, which was claimed to cure long-standing and chronic cases of deafness. Upon receiving a guarantee that all money paid would be refunded if no benefit accrued after a free trial, plaintiff sent a guinea and received in return a spray penetrator and crystal penetrator, sufficient articles being sent for a month's trial. At the end of that time plaintiff wrote that he was receiving no benefit. Defendant persuaded him to continue the treatment, and on June 1 plaintiff ordered another supply, sending 10s. 6d.; but as the treatment, after nine weeks, did not effect any improvement, he on July 8 asked for the return of his money. The defence was that the free trial was for fourteen days only, but the Judge said there was no mention about a fortnight on the guarantee. He held that the plaintiff was entitled to 1l. 1s., which was sent upon the guarantee. The sum of 10s. 6d. was for additional treatment, and could not be allowed.

IRISH NEWS.

When sending newspapers to the Editor please mark the items of news to which you desire to call his attention.

Brevities.

Mr. Peter Waldron, Ph.C., Ballyhaunis, co. Mayo, is arranging to open a medical hall in that town in the course of a week or so.

Mr. James Barry, chemist, formerly of Greystones, has been elected unopposed to the vacancies for apothecary in Boyle Workhouse and Boyle No. 1 and No. 2 District Councils.

Mr. D. J. Nugent, Ph.C., formerly of Bridge Street, Dungarvan, and now of Terenure, Dublin, has been presented with a solid silver tea-set by his friends in the former town in token of their appreciation.

Sanatorium Benefit.

The majority of Belfast doctors have issued a circular to approved societies under the Insurance Act stating that they have decided to adhere to the decision arrived at by the medical profession in Dublin, and will not enter into any agreement with the Insurance Committee, or an approved society through a local medical committee of the district in which they practise, unless the conditions are satisfactory to and in accordance with the declared policy of the Irish Medical Association and the British Medical Association. [Medical benefit is not provided in Ireland, but a grant is made in respect to sanatorium benefit, which presumably is what this circular refers to.]

Poisonous Substances.

The orders made by the Lord Lieutenant and Privy Council in Ireland (1) making regulations under Section 5 of the Poisons and Pharmacy Act, 1908, as to the sale of poisonous substances, and (2) applying the section to liquid preparations containing 5 per cent. by weight of free ammonia (see *C. & D.*, August 17 and 24), have now been published. Bottles distinguishable by touch have to be used for liquid substances to which the section applies, and since these substances now include liquid ammonia it, as well as the mineral acids, can be delivered or sent out only in "poison-bottles." This comes into force on October 1.

SCOTTISH NEWS.

When sending newspapers to the Editor please mark the items of news to which you desire to call his attention.

Edinburgh.

The sale of photographic goods, in spite of the gloomy summer, seems to be well up on that of last year, according to reports.

Mr. J. Chalmers, town traveller for Messrs. Pinkerton, Gibson & Co., wholesale druggists, is leaving Scotland for Australia about the end of this month.

Monday, September 16, is the autumn holiday. A fair proportion of pharmacists have already agreed to close all day, remaining open on the usual half-holiday.

Last year it was a case of wearily waiting for supplies of fly-papers from some of the wholesalers, but September 1912 witnesses many pharmacies with a practically untouched stock.

Business is becoming a little brisker, especially in working-class districts. It is astonishing what numbers of people of a class which formerly seldom bothered about holidays now go away with the youngsters for anything from a fortnight to six weeks, and this, of course, makes tradesmen lose regular custom for a while.

Glasgow and the West.

Mr. McArthur, late of Messrs. Cockburn & Co., Ltd., Paisley, has joined the staff of the Glasgow School of Pharmacy.

Particulars regarding the benefits, etc., of the Chemists' Friendly Society are eagerly anticipated, and these are likely to be issued to the members at an early date.

The September monthly medal competition of the Glasgow Pharmacy Golf Club will be held over Williamwood on Tuesday, September 17, two to qualify in each class.

A meeting of pharmacists was held in the lesser Town Hall, Hamilton, on Wednesday, September 11. Mr. J. Rutherford Hill addressed the meeting, and it was resolved to form a local Pharmaceutical Association.

The Glasgow and West of Scotland Chemists' Association has issued to its members a special "whip," requesting chemists to plump for Tuesday afternoons for the half-day closing order, which the Corporation has at length agreed to grant.

FRENCH NEWS.

(From the "C. & D." Paris Correspondent)

LOCAL ANÆSTHESIA AND SELF-OPERATIONS.—Dr. Jules Regnault, ranking as a "first-class" surgeon in the French navy, has recently gained temporary notoriety by the fact of performing surgical experiments on his own person. "To operate on myself, with a local anæsthetic, and without any surgical aid," was the modest "scientific experiment" which he proposed and practised. His successful and painless self-operation for hernia has, he adds, proved that local anæsthesia produced by cocaine may, in certain cases, replace general anæsthesia in many important operations.

PROGRESS OF THE METRIC SYSTEM.—M. Charles Edouard Guillaume, Director of the International Bureau of Weights and Measures, recently communicated an interesting paper on the "Evolution of the Metric System" to the Société de Physique. He noted that the system is now obligatory in the Argentine, Austria-Hungary, Belgium, Brazil, Bulgaria, Chili, Columbia, Cuba, Denmark, France, Germany, Guatemala, Holland, Italy, Luxemburg, Mexico, Montenegro, Norway, Peru, Portugal, Roumania, Servia, Spain, Sweden, Uruguay, and the Central Mexican republics. In Bolivia, Egypt, Great Britain and Ireland, Greece, Japan, Paraguay, Russia, Siam, Turkey, Venezuela, and the United States it is optional only. But it appears probable that Greece and Siam will shortly declare its use obligatory, and in the United States legal units of existing weights and measures are defined by their relation to metric units, and not by the British Imperial standards. The fundamental units defined by the 1889 Convention, at which twenty States were officially represented, were those of length, time, and mass. The two former are clear enough; but the kilogram is frequently supposed to be a unit of weight, whereas ever since its introduction in 1799 it has never been really considered anything but a mass unit. In view of the feeble but appreciable difference between the volume of a kilogram of water and a cubic decimetre, a distinction is made between the latter and the litre. A litre, according to the most up-to-date authorities, contains $\frac{1000}{1000000}$ (twenty-seven millionths) more than a cubic decimetre.

A FRENCH PHARMACIST AT MARRAKECH.—The prisoners at Marrakech who were relieved on Monday are not the first Frenchmen to visit that remote portion of Morocco. It was in the "spacious days of great Elisabeth" that Jean Mocquet, apothecary to the King of France and Navarre, made his memorable and adventurous journeys to Morocco. He sailed from Lisbon in 1602 with a cargo of wheat and biscuit for the garrison of Mazagan, and, luckier than his predecessors (who had failed to run the gauntlet of the Barbary corsairs), landed and revictualled the starving troops, who would otherwise have been obliged "to render themselves into slavery to the Moors." The worthy apothecary, after feeding the hungry, tended the sick, nearly missed his ship on his way back, being engrossed in search of objects of natural history when the *Sirène* hoisted sail. In 1606 we find him once more aboard a "Morocco-bound" vessel hailing from La Rochelle. He landed at Safi just at the time that Mouley Abou Farès, the Sultan's chief warrior, arrived with a caravan from Marrakech. Mouley fell ill, and hearing that a *giaour* "taleb" (medicine-man) was in the town, sent for him. Mocquet found the chief "in his tent, very fine and brodered with handsome Mauresque ornaments." A Jew was brought in as interpreter, and having thus learned the ailment of his Oriental patient, the apothecary compounded a mighty vermifuge, which acted with marvellous effect, the results conclusively proving the accuracy of his diagnosis. "After that he was quite well and we became friends," Mocquet relates. Mouley and his chiefs feasted the great medicine-man right royally, and insisted on his taking a little excursion to Marrakech. He had various adventures, including one with a hard-mouthed horse, who nearly carried him over a precipice; but his Moorish friends saved him in time, and

on September 2, 1606, he entered the town, remaining there till October. A revolution occurred while he was there, and his friend Mouley was dethroned, but he arrived safely in Paris in 1607. King Henry IV. was deeply interested, and henceforth Mocquet was *persona grata* at the Court.

SOUTH AFRICAN NEWS.

(From "C. & D." Correspondents.)

"The Chemist and Druggist" is regularly supplied by order to all the members of the seven Societies and Associations of Chemists in British South Africa, as well as to other chemists in business there.

Cape Province.

BUSINESS CHANGE.—Mr. W. E. Griffiths, chemist and druggist, Queenstown, who has been established six and a half years, has removed his pharmacy into new premises, where he has much greater space and up-to-date improvements. Mr. Griffiths informs us that, although the medical men do all their own dispensing and supply their patients with many requisites, he has been able to build up his business mainly by the aid of his own proprietaries. Business life in Queenstown, he says, is very similar to that in provincial towns at home, but without the hustle. The hours are much shorter, however—7.30 A.M. to 6 P.M., a half-holiday on Wednesday, and practically no Sunday duty.

ANALYST'S REPORT.—The report for 1911 of the senior analyst (Dr. Juritz) to the old Cape Government, although compiled, has not yet been published. The Union Government of South Africa appears to be too busy with the mail-contracts question to consider the scientific side of domestic affairs. It is safe to say that no official of the late Government has done better service to the Cape than the senior analyst and his staff, yet to-day little or nothing is heard of this department. In South Africa the senior analyst has had a very difficult task. In no small way the tobacco plantations of the country, from Cape Point to Northern Rhodesia, are due to his foresight and advice. The same may be said of the maize industry, or, as it is known in South Africa, the mealie exports. The improvements incidental to the wine industry are due to the analytical department. At the moment South Africa is more concerned with the "black peril" and the "defence scheme" than anything else; but sooner or later she will have to get back to her scientific work, then money will be found to pay for the necessary work.

Orange Free State.

SMALL-POX.—The small-pox epidemic has spread to Potchefstroom, in which town five or six cases have been reported. The authorities, however, have now got the outbreak well in hand, and it will be of short duration.

Transvaal.

MR. L. R. TIBBIT, managing director of Messrs. Phillips & Co., Ltd., has been elected President of the Pretoria Golf Club.

PROPRIETARY ARTICLES.—In view of the formation of a South African P.A.T.A., an "Argus" reporter interviewed an agent who supervises the sales in South Africa of several proprietary articles, the following being a summary of his opinions:

He (the agent) did not appear to take the subject seriously. If, he said, such an association comes into force, any cutting will have to be dealt with by the makers, since an association can have little power without the manufacturer, and more than one firm says at what rate its products should be sold. "The chemist's business," he added, "is not what it was. Except for a few poisons, there is little that a man of ordinary intelligence cannot handle in a drug-store. Departmental stores sell most proprietary medicines, toilet articles, etc., and the druggist would like to see supplies to these stores stopped altogether. It might be good for the druggist, but the public has to be considered." The Pharmaceutical Society had the sympathy of most of the manufacturers, but these will wait and see what kind of an organisation the Cape can put up. "If," he said, "the Society threatens the manufacturer with substitution, or attempts to force a given maker into the ring, trouble will

ensue, and the druggists will know all about it. In a departmental store a request for a box of So-and-So's pills is promptly complied with, the store salesman has your money in quick time. They have no time in stores to talk substitution. The turnover is quick and smaller profits pay. The departmental store buys in large quantities, and consequently secures the best rates."

CHEMISTS AT SOCCER.—The Johannesburg Chemists' Football Club played the Johannesburg Police Club on August 14 in the League Cup final, and after a determined struggle the police won by two goals to one. The following played for the chemists: Cairns; Hollingworth and Hollingworth; Metcalfe, Surtees, and Hills; Hanger, R. Cowie, Smith, Jones, and Smith.

Pharmaceutical Society of Cape Province.

A WELL-ATTENDED MEETING of the Cape Pharmaceutical Society was held at the Society's rooms on August 15, Mr. J. Austin Thomas, J.P., in the chair. Major Liebman, M.A. (Hon. Secretary of the St. John Ambulance Association), was a guest. The routine business being disposed of, Mr. Tothill's motion, "That a closer observance of the weekly half-holiday be enforced," led to a lengthy discussion, in which most of those present participated. A resolution to that effect having been passed, a committee, consisting of Messrs. Tothill, Aitken, and W. J. H. Thomas, was appointed to deal with the matter, circularise the master chemists asking for their co-operation, and report to the next general meeting.—It was decided to hold a social towards the middle of next month, Messrs. Peck and Mathews being asked to make the necessary arrangements.—Major Liebman then addressed the meeting at considerable length on ambulance matters in connection with the Defence Scheme, and with a view to forming a company of the St. John Ambulance Association among chemists. It was proposed by Mr. Peck that the formation of an ambulance class be considered at the next general meeting. A hearty vote of thanks to the lecturer concluded a most interesting and instructive meeting.

Natal Pharmaceutical Society.

THE MONTHLY MEETING was held at the rooms of Mr. G. Stuart Jones on August 15. Messrs. Dunkerton (Chairman), Elgie, Jones, Anderson, Stranack, Fyvie, Gale, Edwards, Charlton, and Goodbrand (Hon. Secretary) were present.

Correspondence.—The Hon. Secretary read: (1) A letter from the Cape Pharmaceutical Society on the subject of the importation of acetic acid; (2) a letter from the Orange Free State Pharmaceutical Society on the same subject; (3) a letter from the Natal Pharmacy Board stating that the Board would request the Minister of the Interior to take action in the matter of the Regal Manufacturing Co.; (4) a letter from the Natal Pharmacy Board enclosing copy of resolution sent to the Secretary for the Interior (Defence), and his reply, which stated that a general exemption could not be given to chemists under the Defence Bill, but that each case would receive the consideration of the Exemption Board.

Notice of Motion.—Mr. Elgie moved for the third time that Rule 18 be altered to read: "No member of the Pharmacy Board, being a Government nominee, may be President of the Society." Carried.

Banking Account.—Mr. Jones proposed in a long resolution, which was seconded by Mr. M. W. Stranack, that the Society open a banking account with the Standard Bank at Durban. Mr. Elgie took exception to a phrase in the motion which appeared to sanction an overdraft, and suggested an alteration, which was agreed to, whereupon the motion passed.

Complimentary Dinner to Mr. Anderson.—Mr. Dunkerton proposed a vote of congratulation to Mr. Anderson on his election as a Town Councillor, which was unanimously carried, and it was also agreed to entertain him to dinner. Mr. Jones proposed and Mr. Elgie seconded: "That the Secretary be instructed to keep a full record of the proceedings, to remain as a standing proof of our appreciation of Mr. Anderson's services in connection with our Society in the past and our good wishes for his welfare in the future." Carried unanimously.

New Member.—Mr. Jones proposed, and Mr. Elgie seconded, that Mr. Charlton be re-elected a member of the Society. Carried unanimously.

Discussion on Report of Commission on Commerce and Industries and Chamber of Commerce Report.—Mr. Dunkerton opened the way for a discussion on the above reports by a detailed statement of the several points which were of interest to chemists. After a lengthy discussion the following were the principal recommendations adopted: (1) Resolution proposed by Mr. Jones, "That patent, proprietary, and toilet preparations, other than perfumery, should pay

a duty of 25 per cent. regardless of what they contain." Carried. (2) *Glycerin*.—The duty to be the same until the supply equals the demand. (3) *Bulk*.—That a fully comprehensive definition of the word "bulk" should be given. (4) *Disinfectants*.—That all disinfectants should be admitted free providing they are of a standard strength. (5) *Pills*.—That pills of a known formula should pay an *ad valorem* duty. (6) *Spirit Duty*.—That the spirit duty of 20s. per gal. on imported tinctures and essences should remain the same. Mr. Anderson proposed that the committee should deal further with the matter, which was agreed to. Mr. Elgie suggested that the Society should have an official representative on the Chamber of Commerce, but this was not agreed to.

Pharmaceutical Society of the Transvaal.

THE FIFTH ANNUAL GENERAL MEETING of the Pretoria branch was held at Pretoria on August 12, Mr. E. Galpin in the chair. Among others present were Messrs. Sachs, Caplan, Tibbit, Mossop, Cooper, Hester, Anderson, and G. Todd (Hon. Secretary). The minutes of the last meeting were read and confirmed. The financial statement, which showed a satisfactory balance, was also adopted. The following officers were elected for the ensuing year: *Chairman*, Mr. L. R. Tibbit; *Hon. Treasurer*, Mr. S. Meyerson; *Hon. Secretary*, Mr. G. Todd; *Committee*, Messrs. Bones, Galpin, Sachs, Mossop, and Anderson. A discussion then followed upon the project to form a South African branch of the P.A.T.A. Mr. Tibbit proposed a resolution that the Pretoria branch of the Society be heartily in accord with the movement. Mr. Sachs seconded, and it was passed unanimously. Messrs. Bones, Sachs, and Tibbit were appointed delegates to attend a meeting in Johannesburg. A report was presented of the visit of the members of the Pretoria Pharmaceutical Football Club and billiard-players to Johannesburg on August Bank Holiday, which has already been reported in the *C. & D.* Mention was also made of the kindly welcome and hospitality shown by the Johannesburg chemists, and it was resolved to invite the members of the Johannesburg Chemists' Athletic Club to Pretoria on October Bank Holiday, challenging them to golf, tennis, and billiards. Votes of thanks to the Chairman and the officers concluded the proceedings.

INDIA AND THE EAST.

(From the "C. & D." Correspondents.)

PERSONAL.—Mr. I. H. Burkill, Economic Botanist to the Botanical Survey of India, has been appointed by the Secretary of State for the Colonies to succeed Mr. H. N. Ridley as Superintendent of the Government Botanic Gardens, Singapore. Mr. Burkill will be greatly missed in scientific circles in Calcutta, where he was for some years Fellow and Examiner in Botany to the University and a member of Council of the Asiatic Society of Bengal.

JAPANESE MEDICINES FOR CHINA.—According to the report on the trade of Mukden in 1911, recently published by the Chinese Imperial Maritime Customs, the growing belief in the efficacy of every variety of foreign medicines and medical appliances among the Chinese generally is notable and is being fully taken advantage of by the Japanese, who are selling large quantities of those goods. It appears from the report on the trade of Dairen in 1911 that the importation of medicines through that port during the year was more than double that in 1910.

AN ACCOUNT CASE.—At the High Court, Calcutta, on August 9, Mr. Justice Chaudhuri disposed of the suit brought by Butto Kristo Paul & Co. against Charan Das Mohanta and another. Mr. B. Ghosh appeared for the plaintiff firm. The defendants were not represented. Mr. Ghosh said that Butto Kristo Paul & Co. are a well-known firm of chemists and druggists in this city. They sued to recover Rs. 3,198-8-9, being the price of the balance of goods sold and delivered to the defendants, who carried on business in Lahore. Originally the suit was to recover the sum of Rs. 3,620-13-6, but since the suit was filed the defendants had made a part payment of Rs. 300 on account and had also returned several goods, for which the plaintiffs were willing to allow them credit. His Lordship granted a decree for the amount claimed.

THE COCAINE HABIT.—In order to strengthen the hands of the Excise Department, the Bombay Government have

just amended the Abkari Act in a manner that may be expected to act as a deterrent. Sir Richard Lamb, who introduced the amendment, said it was designed to check the illicit importation of cocaine, and gave Abkari officers the power to secure surety bonds from the accused charged with an offence under the Act, while one clause raised the powers of magistrates in regard to fines. He referred to a case which came up recently before the Chief Presidency Magistrate involving cocaine to the value of Rs. 20,000, while the highest fine he was able to impose was Rs. 250. The amendment now introduced did away with that difficulty, for it enabled a magistrate to impose a term up to two years' imprisonment and a fine of Rs. 4,000. The amendment was passed. In view of the large importations of cocaine into Calcutta some such provisions of the law in the Presidency would appear to be called for, says the Calcutta "Englishman." The cunning devices that are resorted to in the importation of this pernicious drug are innumerable. Quite recently a large consignment was sent out packed in tins which usually contain a farinaceous food, and the discovery that these tins were filled with cocaine was quite an accidental one.

LIMITED COMPANIES.

New Companies Registered.

The letters P.C. mean Private Company within the meaning of the Companies Act, 1907, and R.O., Registered Office.

WILLIAM LEES, LTD. (P.C.).—Capital 500*l*. Objects: To carry on the business of dispensing chemists (wholesale and retail), opticians, retailers of drugs, medicines, etc. The first directors are W. Lee (chairman), 12 Matlock Road, Brighton, chemists' assistant; Mrs. F. B. Lee; and H. Browne.

DR. BLOSSER, LTD. (P.C.).—Capital 1,000*l*. Objects: To carry on the business of manufacturers of and dealers in proprietary and patent goods, medical, pharmaceutical, and chemical articles, etc. The first directors are C. Blosser (life governor) and G. H. Jewett. R.O., 8 Bouverie Street, London, E.C.

PINEX CO., LTD. (P.C.).—Capital 100*l*. Objects: To carry on the business of manufacturers of and vendors of patent medicines, in particular of the medicinal preparation known as "Pinex Cough-mixture for Coughs and Colds in the Throat." The first directors are W. H. Noll (governing director) and A. H. Otis. R.O., Caldwell Yard, 37-8 Upper Thames Street, London, E.C.

JOHN RILEY & SONS, LTD. (P.C.).—Capital 100,000*l*. Objects: To carry on the business of chemical-manufacturers, manufacturers of and dealers in, *inter alia*, pharmaceutical, medicinal, chemical, industrial, and other preparations, etc., to take over the business of chemical-manufacturers carried on by the executors and trustees of the late J. E. Riley as "John Riley & Sons," and to adopt an agreement with W. H. Shaw and O. Riley. The first directors are O. Riley (permanent chairman and managing director, subject to holding 3,000 shares) and W. H. Shaw. R.O., Chemical and Copper Works, Hapton, near Accrington.

W. W. HILL, SON & WALLACE, LTD. (P.C.).—Capital 15,000*l*, in 1*l*. shares. Objects: To carry on the business of manufacturers of and dealers in colours, paints, varnishes, oils, turpentine, methylated and other spirits, drysalteries, chemicals and other products, etc.; to acquire the businesses (1) of Wallace & Co. (Manchester), Ltd., and (2) of W. W. Hill & Son (Salford), Ltd.; to adopt agreements (a) between W. W. Hill & Son (Salford), Ltd., of the first part, A. I. Macnair, R. Macnair, D. S. Macnair, and R. Spittal, trading as J. & D. Macnair & Co. at Allan Street, Bridgeton, Glasgow, of the second part, the said A. I. Macnair, R. Macnair, D. S. Macnair, and R. Spittal, in their individual capacities, of the third part, and Mrs. B. Hill and T. G. Armstrong, of the fourth part; and (b) between the said four parties, trading as J. & D. Macnair & Co., of the first part, Wallace & Co. (Manchester), Ltd., of the second part, and J. T. Wallace of the third part. The subscribers (A. D. Deas, C.A., Glasgow, and A. A. Marwick, clerk, Glasgow) are to appoint the first directors.

Company News.

A. J. WHITE, LTD.—The directors give notice of an extraordinary general meeting to be held at Memorial Hall, Farringdon Street, London, E.C., on October 1, at 2 p.m., at which resolutions will be submitted for reducing the

capital of the company from 1,000,000*l*. to 300,000*l*. It is proposed to reduce each ordinary share from 1*l*. to 2*s*. and each preference share from 1*l*. to 10*s*., and to consolidate the new ordinary and preference shares into a single class of ordinary shares of 10*s*. each. In a circular issued to the shareholders it is stated that: "The company's goodwill, trade-marks, and recipes, etc., were taken over from the old company of A. J. White, Ltd., at 914,397*l*. 17*s*., and have ever since stood at that figure in the company's books. For the past six years the average annual net profits of the company's business have amounted to 32,404*l*. 7*s*. 7*d*., the highest figure in any of the six years having been 36,156*l*."

BANKRUPTCY REPORT.

Re James Horton Wynkoop, Duke Street, London, and elsewhere.—The public examination of this debtor was held by Mr. Registrar Hope, at the London Bankruptcy Court, on September 10, the accounts showing liabilities 4,304*l*. 16*s*. and assets *nil* (see *C. & D.*, September 7, index folio 395). The failure was attributed to the loss of an action in which judgment for 4,000*l*. was given against him, and to Stock Exchange losses. The examination was concluded.

DEED OF ARRANGEMENT.

Taylor, Joseph, 8A Ainsworth Road, Radcliffe, Lanes, Chemist.—Trustee: J. A. Crook, 15 Thorpe Street, Whitefield. Dated, August 30; filed, September 4. Liabilities unsecured, 209*l*.; estimated net assets, 90*l*. Composition of 5*s*. in the pound, payable on or before the expiration of seven days after execution hereof out of a sum of 60*l*., lodged by another person on behalf of debtor with the trustee. The creditors include: Hirst, Brooke & Hirst, Ltd., Leeds (59*l*.); Blyton, Astley & Co., Manchester (4*l*.); J. Taylor & Co., Ltd., Radcliffe (28*l*.).

GAZETTE.

Partnerships Dissolved.

DAVIS, H. W., and **MONTGOMERY, D. F.**, Grafton Street, London, surgical and electro-medical instrument makers, under the style of Davis & Montgomery.

RING, C. A. E., and **ROBINSON, C. C.**, Brinklow and Pailton, Warwick, medical practitioners, under the style of Ring & Robinson.

SPIER, E., and **HAMBLETON, H. C.**, Thorburn Street, Chorlton-on-Medlock, Manchester, chemical manufacturers, under the style of Locke, Spier & Co.

The Bankruptcy Acts, 1883 and 1890.

RECEIVING ORDER.

VIGERS, THOMAS WHITEHAIR, and **FORD, ALBERT GEORGE NEPEAN** (trading as The Standard Photographic Co.), of Hampden House, Kingsway, and Queen Elizabeth Street, Bermondsey, London, manufacturers of photographic paper.

BIRTHS.

FEATHERSTONE.—At 75 Park Road, Chiswick, on September 8, the wife of Herbert Charles Featherstone (Chesebrough Manufacturing Co.), of a son.

SAVAGE.—At Bradford, on September 2, the wife of J. W. Savage, of a son.

MARRIAGES.

HOBSON—MORGAN.—At St. John's Church, Chatham, on September 4, by the Rev. J. Bailey, assisted by the Rev. C. J. D. la Touche, Bernard Dalby Hobson, Maidstone, to Alice Daisy, eldest daughter of Mr. A. W. Morgan, chemist and druggist, Railway Street, Chatham.

PRICE—BELL.—At Cavendish Congregational Church, Manchester, on September 6, by the Rev. James Cregan, Lawrence Marsden Price, M.A., Ph.D., Columbia, Mo., U.S.A., to Minnie Josephine Bell, M.A., only daughter of Mr. Joseph Bell, chemist and druggist, 113 London Road, Manchester.

ROBINSON—ROLLIN.—At Durham Congregational Church, on September 4, Philip Moffat Robinson, son of Mr. Chas. P. Robinson, J.P., Goldwell House, Chesterfield, of Robinson & Sons, Ltd., surgical-dressings and box manufacturers, Chesterfield, to Edith Marian, younger daughter of Mr. John Geo. Rollin, of The Avenue, Durham.

SIMPSON—ROY.—At 1025 Duke Street, Glasgow, by the Rev. C. McEwing, on September 3, Henry Simpson, chemist and druggist, Parkhead, to Helen, third daughter of Mr. William Roy.

WEBSTER—MORGAN.—At St. John's Church, Chatham, on September 4, Ernest Abbott Kent Webster, Chatham, to Bertha May, second daughter of Mr. A. W. Morgan, chemist and druggist, Railway Street, Chatham.

DEATHS.

PIQUET.—On September 5, Mr. John Piquet, Ph.C., 12 York Street, St. Heliers, Jersey, aged eighty-seven. Mr. Piquet maintained to the end an active interest in his business, which he started so long ago as 1847. He was elected a member of the Pharmaceutical Society in 1853. Mr. Piquet was a keen naturalist, and some years ago presented to the Société Jersiaise, of which he was a member, an herbarium of the local flora. He leaves four sons and a daughter.

PULLAR.—At Tayside, Perth, on September 9, Sir Robert Pullar, LL.D., aged eighty-four. Sir Robert was an original member of the Society of Chemical Industry, and had been Chairman of the Scottish Section. He was member of Parliament for Perth for four years until 1910. His father was the founder of the world-famed Perth Dye Works, and Sir Robert as a young man had much to do with the practical application of Perkin's mauve, the first synthetic dye, helping W. H. Perkin when he went to Perth to carry out the final stages of his experiments.

WING.—At 2 Victoria Quadrant, Weston-super-Mare, on September 11, Mr. Lewis Wing, Ph.C., formerly of Chislehurst, and founder and chairman of Lewis Wing, Ltd., chemists and druggists, aged sixty-two.

WILLS PROVEN.

MR. GEORGE CHEETHAM, 65 Ugate, Louth, Lincs, chemist and druggist, who died on March 30, aged sixty-three, left estate of the gross value of 2,360*l.* 7*s.* 4*d.*, with net personalty sworn at 345*l.* 15*s.* 7*d.*

MR. GEORGE SAVILLE, 192 Kirkgate, Wakefield, Yorks, chemist and druggist, who died on April 16, aged sixty-three, left estate of the gross value of 2,572*l.* 0*s.* 10*d.*, of which 1,094*l.* 17*s.* is net personalty.

MR. WILLIAM CARRUTHERS, Moffat, Dumfries, a partner in the firm of Messrs. Carruthers & Taylor, chemists, Workington, who died on September 7, left personal estate in the United Kingdom valued at 2,202*l.*

The late Mr. Benjamin Edward Reina Newlands, F.C.S., of Newlands Brothers, analytical chemists, of 2 St. Dunstan's Hill, E.C., left estate of the gross value of 19,398*l.* 10*s.* 3*d.*, with net personalty 16,785*l.* 7*s.* 6*d.*. Probate of his will, dated September 14, 1908, has been granted to his widow Mrs. Mary Ann Newlands, his son Mr. Benjamin Edward Reina Newlands, and his daughter Miss Mary Ann Jenner Newlands. The testator left 200*l.* and his household and personal effects to his wife, Mrs. Mary Ann Newlands, and the residue of his estate upon trust for his wife for life, with remainder upon trust for his children in equal shares.

MR. JOHN MILTON OXLEY EMINSON, Ph.C., Peterborough, formerly in business at 224 Roman Road, Bow, London, E., who died on May 9, left estate valued at 5,018*l.* 10*s.* 1*d.* gross, with net personalty 3,990*l.* 16*s.* 7*d.*. Probate of his will, dated March 20, 1909, has been granted to the Public Trustee. The testator left 1,000*l.* Cardiff Corporation Bonds to his daughter Gertrude; 575*l.* to his son Herbert; 565*l.* to his son Robert George; his household and personal effects and consumable stores to his wife, Mrs. Fanny Fronent Eminson; certain real estate upon trust for his wife for life, and, subject thereto, all of his property to his children in equal shares.

PERSONALITIES.

Notes for this section sent to the Editor should be authenticated and must not be in the nature of advertisements.

LADY BOOT was among the passengers by the *Caronia*, which left Liverpool for New York on September 10.

MR. STANLEY MORRIS, chemist and druggist, late of 118 Freeman Street, Grimsby, now of Brisbane, has been registered as a pharmaceutical chemist in Queensland.

MR. S. C. DEVERSON, whose jubilee in connection with Messrs. Gale & Co., 15 Bouverie Street, London, E.C., was noted in the *C. & D.*, May 20, 1911, has this month retired.

MR. FRANK ROSS, of Calcutta, who has spent the latter part of his visit to London in a nursing home (where he had a successful operation for an appendical trouble), sails by the *Marmora* from Marseilles on September 13.

THE honorary freedom of the Borough of Heywood is to be conferred upon Mr. Thomas Kay, J.P., manufacturing chemist, Moorfield Hall Street, Stockport, in recognition of his recent gift of a magnificent art gallery and museum to the town, of which he is a native.

DR. REZSO FORGACS, of Budapest, is now in England on a visit of several weeks' duration, his object being to investigate the conditions under which the cultivation of drugs and medicinal herbs is carried on in this country. We understand from Dr. Forgacs that a company is being formed in Hungary to develop drug-cultivation and the collection of medicinal herbs on a large scale. The Hungarian Government is giving its support to the project, and many of the leading manufacturing chemists and pharmacists are interested in the matter.

MR. JNO. HOLMES, Ph.C., of 2 Duckworth Lane, Bradford, who has disposed of his business to Mr. George Penty, has joined the staff of Messrs. Robert Gibson & Sons, Manchester, as their Yorkshire representative. Mr. Holmes is Treasurer of the Bradford Chemists' Association, with which organisation he has been closely identified for many years. Mr. George Penty, chemist and druggist, who succeeds him in business, has been dispenser at the Bradford Royal Infirmary for twenty-two years. His place at the latter institution will be filled by Mr. Frederick Foster, chemist and druggist, formerly chief assistant pharmacist at the Birmingham General Hospital.

MR. WILLIAM MAIR, F.C.S., of Messrs. Fletcher, Fletcher & Co., Ltd., manufacturing chemists, London, is re-visiting the United States on the business of his firm, and is also attending the Eighth International Congress of Applied Chemistry at New York. He is a guest of the Columbia University, and is residing at the Hartley Hall. Mr. Mair is the only British pharmacist who has taken part in the proceedings of the Pharmaceutical Chemistry Section, and Professor Remington paid him and this country a compliment in calling upon Mr. Mair as the first to read a communication before the Section.

SIR THOMAS ROBINSON (Dublin), Mr. Edmund Carpenter (Bristol), Mr. Edwin Thompson (Liverpool and Manchester), and Mr. James B. Francis (Wrexham) are now on a visit to the United States for the purpose of attending the Convention of the United Drug Co. at St. Louis on September 17. They were entertained to dinner at the Compton Hotel, Liverpool, on Wednesday evening, September 4, before sailing, Mr. Louis S. Wandell presiding. Sir Thomas Robinson, Mr. Carpenter, and Mr. Thompson are joining the directorate of the Company as representatives of the United Kingdom. It is expected that they will be able to report to their fellow-directors on September 14 that a "Rexall" agent has been appointed in each of the leading towns in Great Britain and Ireland.



MR. W. MAIR, F.C.S.



Reported by Our Own Representative at the Congress.

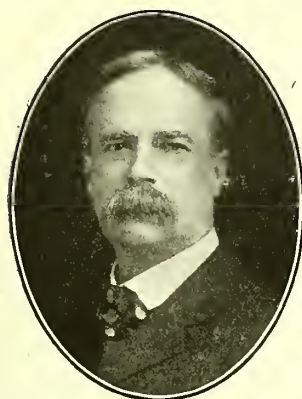
SPECIAL trains were provided by the Pennsylvania Railroad to convey the Congress members and their ladies to Washington on Tuesday afternoon, September 3, the first leaving the station on Seventh Avenue and Thirty-Second Street at 4.22. Others followed at intervals. The trains were magnificently equipped, and each had a dining-car for service during the five-and-a-half hours' journey to Washington. The business on Wednesday was carried through according to programme, and Thursday was devoted to excursions, the return to New York being taken from 4.55 p.m. onwards. I shall report more fully on these matters by mail.



BADGE OF THE CONGRESS.
This was presented to each member.

Pharmaceutical Chemistry Section.

The work of this section commenced in one of the lecture-halls of Columbia University on Friday morning,



PROF. J. P. REMINGTON,
President Pharmaceutical Section.

September 6, under the presidency of Professor Joseph P. Remington, F.C.S., etc., of Philadelphia. Among those present were Dr. J. Takamine, Dr. Wooyenaka (from Japan), Dr. Weber (Darmstadt), Professor Caspari (St. Louis), Dr. Virgil Coblentz, Dr. George D. Rosengarten (principal Secretary of the Section), Mr. Benjamin L. Murray (Merek & Co.), Dr. Veith (Ludwigshafen), Dr. Lueders (Hoechst a/M.), Mr. Hugh Craig, Mr. William Mair, F.C.S. (Edinburgh), and Mr. Caswell A. Mayo. The secretarial duties were undertaken by Mr. Otto Raubenhimer, Ph.G., of Brooklyn, a member of the U.S.P. Revision Committee, who has several languages at his command.

The President formally opened the proceedings by giving a hearty welcome to pharmacists from foreign countries and outlining the work which lay before the section. He then called upon Mr. William Mair to read a report by Messrs. Peter MacEwan, F.C.S., and George P. Forrester, F.C.S., Secretaries of the International Committee, on

VARIATION IN TOXIC DRUGS.

At the last meeting of the Congress in London two papers were communicated to the Pharmaceutical Chemistry Section—(1) by Peter Wyatt Squire and Charles W. Caines on "The Standardisation of Potent Drugs, and International Agreement in Regard to Them," and

(2) by Peter MacEwan and George P. Forrester on "Variations in the Activity of Certain Toxic Drugs, with Suggestions for an International Inquiry." After these communications had been discussed the section resolved:

That this meeting of the Pharmaceutical Chemistry Section of the International Congress of Applied Chemistry, having received and discussed communications by Messrs. Squire and Caines and MacEwan and Forrester, resolves that it is desirable that an international inquiry should be instituted with a view to securing (1) greater uniformity in the commercial supplies of potent drugs and the means for determining the same, and (2) approximation in the Pharmacopœias of the world to common standards of activity.

With a view to advancing these objects, this meeting further recommends that the following Provisional Committee be appointed to inquire and report on the subject to the next meeting of the Congress: Messrs. P. W. Squire and F. Ransom (Great Britain), Professors H. Thoms and E. Schmidt (Germany), Professor E. Bourquelot and M. Léger (France), Professors Piutti and Guareschi (Italy), Professors Remington and Rusby (United States), with Peter MacEwan (Great Britain and U.S.A.) and G. P. Forrester (European Continent) as Secretaries.

This meeting recommends that the Provisional Committee shall have power to invite as members with equal rights persons who have interested themselves in this subject, and further that this resolution shall be conveyed to the Governments and pharmacopœial authorities who were represented at the Brussels Conference (1902) on the unification of potent remedies.

This resolution was confirmed at the final General Session of the Congress on June 2, 1909; but it appears not to have been communicated to the respective Governments of those countries which have national Pharmacopœias, and if it be desired to continue the inquiry on an international basis some effort might be made to repair the omission. In their paper three years ago the Secretaries remarked that

"A central bureau, etc., might be nominated or selected for the purpose of co-ordinating the facts and to serve as an exchange for all correspondence among the members, especially to facilitate intercourse in the different languages. When all the views have been collected and prepared, the committee should consider and publish them, if thought desirable, with the view to getting further advice on the proposed methods. When that question is finally settled the real research work should begin."

The Secretaries have endeavoured to do their part of this proposal, but it soon became apparent that the standardisation of methods for evaluating the activity of the toxic drugs is of secondary importance to their supply. The bulk of the world's supplies of aconite, belladonna, digitalis, and henbane come from Central Europe, and are gathered from wild plants. This industry, if it may so be called, is of a fortuitous character, and ultimately depends upon labour conditions, so that when the belladonna, for example, is just right for collection, the gatherers may be employed at something that pays them better, and the belladonna has to wait their pleasure. Meanwhile its alkaloidal value is diminishing. Similar conditions apply to the other toxic drugs, and, so far as cultivation is concerned, the Secretaries have ascertained that farmers on the continent of Europe, who make

drug-cultivation a business, are abandoning these toxic plants in favour of herbs of a culinary nature, which pay them better, because there is a better market for them, and they need less attention. For these reasons and other circumstances, it appears to the Secretaries that variation in the activity of the toxic drugs referred to is a phase of the larger problem of supply that attends, more or less, the provision of all drugs, the growth of which man is content to leave to Nature, he simply cultivating according to his wants, with little regard to the future, and smaller respect to quality. The experience of the United States Bureau of Plant Industry as regards American drugs is an example of these statements, which, however, are based upon the more fortuitous circumstances of European collection.

The Secretaries are pleased to report that the need for attention to the question of better supply of the toxic drugs is being recognised in Europe and America. Work has been started independently in America, Austria, England, France, and Sweden with the view to studying the best conditions upon which the toxic drugs can be cultivated and harvested, so that supplies may be ensured of drugs of pharmacopoeial quality in quantity sufficient for the demand. This is specially true of belladonna, and Mr. Francis Ransom, a member of the British Committee, has devoted a portion of his firm's herb-farm to the cultivation of *Atropa Belladonna* on an experimental scale and systematic manner, so far as conditions and manurial influences are concerned, in a district where medicinal herbs have been grown for generations, and he has supplemented the accumulated experience of his firm in herb-growing with the enthusiasm and science of coadjutors skilled in botany and chemistry. The results of this work are embodied in a separate communication to this section by Francis Ransom and H. John Henderson. They are of a nature which appeals equally to commercially minded and scientific pharmacists, since they show how cultivation may be altered so that an acre of soil may grow six times more of the plant than it does under natural and unaided conditions, while the alkaloidal value of the drug is also largely increased. It is scarcely possible to discriminate between the importance of the results in these two aspects; but it may be pointed out that Messrs. Ransom and Henderson's data indicate the conditions under which belladonna of different alkaloidal strengths may be grown, and the man who wants the drug for making alkaloid learns the conditions under which a field which has been accustomed to yield him 6 kilograms of atropine will give him 146 kilograms.

Hitchin is a district not far distant from Rothamsted, where in 1840 John Bennet Lawes commenced those agricultural experiments on grass and cereals in which he was joined in 1843 by Joseph Henry Gilbert, and which are still going on in this year of grace 1912. May the same success attend Ransom and Henderson in the experiments which are in their third year.

Similar work to Mr. Ransom's is also being carried on at the herb-farms of Messrs. Burroughs Wellcome & Co., near Dartford, Kent, and a communication in regard to the results is being made to this section by Mr. Francis Carr, F.C.S.

Kindred work has been done in France by M. Chevalier at Houdan ("Comptes Rendus," 1910, 150, p. 344), where a field containing 50,000 plants per acre was placed at his disposal. The soil was permeable, contained 3.22 to 4.8 per cent. of lime and 0.07 per cent. of phosphoric acid, and nitrogenous manures equal to from 0.12 to 0.15 per cent. were applied. The principal results obtained were as follows:

	Alkaloid per cent.
Plants grown in the usual way	0.320-0.336
Phosphate and potash manures applied	0.480-0.490
Nitrogenous manures only:	
(1) Biennial plants	0.616
(2) Young plants	0.406
Nitrogenous manures on—	
Rich soil	0.676
Stony soil	0.680
Dry soil	0.756

The crops from these plots gave, when used for galenical preparations, an average alkaloidal content of 0.5104 per cent. for the dry leaves. Experiments with *Datura Stramonium* gave quite analogous results, the alkaloidal content of plants manured with nitrogenous products being 0.200 to 0.268, as compared with the normal 0.07 to 0.18.

Experimental work on the cultivation of medicinal plants is also being commenced in Gripholm, Sweden, among them being belladonna and henbane. There has been little success so far.

Besides the foregoing, work is being done in the United States on native medicinal plants, as well as on belladonna, digitalis, and other plants which yield important drugs, and it appears to the committee that it will be useful to keep in touch with these various centres of activity in different parts of the world.

Following upon this Mr. Mair also read the paper on "Cultivation of Belladonna," by Messrs. Ransom and Henderson (printed here, index folio 443). This communication Mr. Mair (who was the only representative of British Pharmacy present) illustrated by a lantern-diagram, graphically showing the results of the effect of manures and other influences on the crop of belladonna.

A paper by Mr. Francis H. Carr, F.I.C., on

The Effect of Cultivation upon the Alkaloidal Content of Atropa Belladonna,

being the results of observations on the Wellcome Materia Medica Farm, near Dartford, Kent, was taken as read. The following is the gist of this communication:

A review of records on this subject shows conclusively that there is a wide variation in the amount of alkaloid in belladonna, but it is difficult to trace the conditions which determine these variations. Soil, climate, and weather influence them. The author has experimented during the past six years on the Wellcome Materia Medica Farm, a plot of land situated at Darenth, on the chalky downs of Kent, and sloping to the south-west. In the near vicinity wild belladonna was occasionally found before these experiments commenced; since then it has become more common owing to the dissemination of the seed by birds.

The soil is light, permeable, and chalky. The following is an analysis of a representative sample of the dry soil after removing pebbles, etc., which represent 20 per cent. of its weight:

CaCO ₃	11.4 per cent.
K ₂ O	0.4 " "
Fe ₂ O ₃ and Al ₂ O ₃	6.2 " "
H ₃ PO ₄	0.6 " "
Total loss on ignition	9.5 " "
Insoluble in acids	72.2 " "

In such a soil and position the belladonna-plant grows very freely. Analyses have shown that the stem, leaves, and root of both the wild and the cultivated plants grown there contain a high percentage of alkaloid. On the whole the cultivated plant has been found to contain a little more alkaloid than that grown wild. Although the addition of manures to this soil is no disadvantage, and may be slightly beneficial, yet where large quantities of nitrogenous fertilisers are employed somewhat lower percentages of alkaloid are observed, owing to the larger growth producing more weight of woody fibre.

In the analytical method adopted, ammonia was used to set free the alkaloid, and with the usual precautions to avoid emulsions the latter was extracted with chloroform, and shaken into 2 per cent. sulphuric acid; it was then again set free with ammonia and shaken out with chloroform. The chloroform residue—usually crystalline—was titrated, using cochineal as indicator.

In the first instance two distinct strains of wild plant were employed; later that which gave the best results was alone cultivated. Representative portions of the stem and leaf were gathered while the plant was in flower, and rapidly and completely dried at 25° to 35° C. The percentage of alkaloid found in the leaves and stem of the dried wild plant was 0.49; in the leaves and stem of the cultivated plant, during the six years 1906 to 1911, the average percentage was 0.56. As other investigators

have usually recorded about 0.45 per cent. in the wild plant, it may be assumed that the plant employed was satisfactory; it therefore follows that the effect of cultivation has been beneficial.

With a view to testing the effect of modifying the plant-food, ground which had been lightly manured was divided into plots, and these were treated with various fertilisers, added at periodic intervals of three weeks during the growing season, March to July. The effect of the more common fertilisers is shown by the following table:

Effect of Fertilisers upon A. Belladonna.

Fertiliser	Time of Application	Per Acre	Percentage of Alkaloid in Dry Stem and Leaf				
			1906 Third Year's Plants	1907 Fourth Year's Plants	1910 First Year's Plants	1911 Second Year's Plants	1912 Third Year's Plants
Main crop.....	—	—	1.54	0.34	0.61	0.59	0.68
Farmyard manure	March	50 loads	0.54	0.34	0.61	0.53	0.71
Nitrate	March & April	2 cwt.	0.52	0.23	0.54	0.46	0.64
Calcium cyanamide	Do.	1 cwt.	—	—	0.69	0.49	0.75
Basic slag	Do.	2 cwt.	0.61	—	0.65	0.56	0.84
Superphosphate...	Do.	5 cwt.	0.46	—	0.81	0.49	0.76
Potash	Do.	5 cwt.	0.61	0.4	0.75	0.53	0.69

In considering these results it must be remembered that the soil is naturally suited to the plant, and the percentage of alkaloid obtained without added fertilisers is already high. The low figures obtained in 1907 were probably due to the seasonal conditions. Atmospheric conditions have a modifying influence. In the following table the percentage of alkaloid present in the dry stem and leaf of the main crop are set out in conjunction with the weather conditions, the rainfall being official figures for London, sixteen miles distant from the farm:

Year	Percentage of Alkaloid in Stem and Leaf	Total Hours Sunshine—May 1 to June 30	Rainfall (same Period)
		Hours	Inches
1905	0.38	387	5.48
1906	0.54	361	3.85
1907	0.34	290	3.54
1909	0.48	387	5.44
1910	0.61	360	4.08
1911	0.59	404	3.62
1912	0.68	Unusually dry and sunny season	

It will be seen that the highest percentages of alkaloid were observed in the most sunny and driest seasons, while the low percentages found in 1905 and 1907 are explained by the heavy rainfall in the former and the lack of sunshine in the latter season.

As regards the question of the best stage of growth at which the plant may best be collected, results indicate that, while the amount of alkaloid may vary during the season from other causes, there is no marked variation due to different stages of growth from June to September, except when the plant begins to fade, when there is a rapid loss of alkaloid. Thus, stem and leaf gathered in different months of the same year have yielded the following percentages of alkaloid, which do not show any consistent variation with the calendar, but vary according to the weather:

Year	Month	Percentage of Alkaloid	Character of Weather during Interval between taking Samples
1905	August ...	0.38	Very wet
1905	September ...	0.35	
1906	July ...	0.54	
1906	October...	0.64	Very fine and very dry
1907	June ...	0.33	
1907	August ...	0.34	
1909	June ...	0.41	Dull
1909	September ...	0.48	
			Fine and dry

Slightly faded shoots having yellow foliage and taken from a healthy plant contained 0.21 per cent.; while healthy shoots from the same plant contained 0.38 per cent. The time of collecting the herb and leaf for use in pharmacy does not, therefore, appear to be a matter of importance, except in relation to weather conditions, and so long as great care is exercised to avoid those parts of the plant in which the least withering or fading has commenced. This precaution as applied to all drug-yielding plants is well recognised by collectors, and the present instance confirms its value.

The fact that the stem and leaves rapidly lose alkaloid when fading, raises a question as to the fate of the alkaloid so lost. On this account, interest attaches to an experiment made with a view to seeing whether any of the alkaloid finds its way into the soil. A plant was grown in Pfeffer's culture-solution, and the solution tested from time to time for alkaloid, but no evidence whatever was obtained that any alkaloid was present in it at any stage, either before or after fading had commenced. Analysis of the healthy stem and leaf showed it to contain a normal amount of alkaloid—namely, 0.56 per cent. It follows from this experiment that during fading the alkaloid is either decomposed or passes back into the root.

Experiments have been made from year to year to test the effect of growing belladonna in partial shade. Shades were constructed of (1) wooden lathes designed to shut off half the direct sunlight, (2) white muslin, (3) red muslin, and (4) green muslin. The resultant percentages are tabulated below:

Year	In Open	Shaded by			
		Lath Shade	White Muslin	Red Muslin	Green Muslin
1906	0.54	0.39	—	—	—
1907	0.34	0.40	0.60	0.63	0.75
1910	0.61	—	0.57	0.8	1.08
1911	0.59	—	0.37	0.6	0.49

The lath shade in the sunny year 1906 reduced the amount of alkaloid, and in the dull season of 1907 it appears to have had no effect, though, in fact, the figures show an insignificant increase. The coloured muslin shades made the growth somewhat attenuated. The green shade had the effect of reducing the amount of inflorescence, and at the same time increasing the amount of alkaloid. In 1911 an experiment was therefore made to see whether the removal of all flower-buds would raise the percentage of alkaloid of a plant grown in the open. The result was negative: Representative plant 0.59 per cent., and suppressed inflorescence 0.54 per cent.

Belladonna-root

of commerce varies greatly in alkaloidal strength. In a number of analyses made of commercial roots, variations from 0.27 to 0.69 per cent. have occurred. The average of twenty-one analyses of German and Austrian commercial roots was 0.40 per cent. Other observers have recorded similar results. Chevalier ("Compt. Rend.," 1910, 150, 344) gives the following figures for Continental roots: French, 0.300 to 0.450 per cent.; Austrian, 0.251 to 0.372 per cent.; Italian, 0.107 to 0.187 per cent. Henderson has shown the average of thirty samples of foreign root to be 0.3 per cent. It is interesting to observe that the average of nine samples of root grown at Darenth is 0.54 per cent. In order to determine whether this variation was due to collecting at different times of the year, roots from the same plot, derived from second year's plants, which have been sown at the same time, were dug up at intervals and dried. The following is a record of the analysis of these samples:

March 1911 ...	0.56 per cent.
May 1911 ...	0.59 " "
June 1911 ...	0.53 " "
August 1911 ...	0.50 " "
December 1911 ...	0.59 " "

The amount of variation throughout the year is thus seen to be very small; there appears, however, to be

slightly less alkaloid present during August, when the fruit is ripening. We must therefore seek other explanations for the low percentage of alkaloid present in commercial belladonna-root. If one considers the figures recorded by various observers, it appears that in the warmest climates, such as those of Italy and Austria, the lowest proportion of alkaloid is to be observed; and this would account for the high reputation of English belladonna. But no such generalisation can be regarded as established until plants grown in those countries in a suitable soil and under careful observation have been submitted to analysis. That such an explanation is not improbable is clear from the published facts relating to other alkaloid-producing plants, which show that different amounts of alkaloid are formed in different latitudes. For instance, Dunstan ("Bull. Imp. Inst.," 1905, 222) has recorded that *Hyoscyamus muticus* grown in Egypt produces 0.6 to 1.2 per cent. of hyoscyamine, while the same species grown in India produces only 0.3 to 0.4 per cent. On the other hand, if the harvesting of the crops is done with less care in one country than in another, more decomposition may take place during the process of drying, and so cause the observed differences. In whatever latitude belladonna is grown, it will doubtless be found that the composition of the soil, the use of fertilisers, and seasonal conditions make for small variation.

A POTENCY SYMPOSIUM.

In the course of an appreciative discussion, in which Messrs. Veith, Lueders, Mayo, Sollman (Cleveland), and others took part, the report by the Secretaries was approved. The speakers were also highly appreciative of Messrs. Ransom and Henderson's communication, which was regarded as embodying the right sort of work required to be done before questions of potency can be definitely settled.

A series of papers on the cultivation of digitalis, stramonium, and American cannabis in the United States was then read. These were (1) by Messrs. F. A. Miller, B.S., and W. F. Baker, M.D., on "The Potency of First-year Cultivated Digitalis-leaves as indicated by Physiological Assay"; (2) by Mr. Miller and Mr. J. W. Meader on "The Alkaloidal Content of Individual Plants of *Datura Stramonium*, L., and *Datura Tatula*, L."; and (3) by Mr. C. R. Eckler and Mr. Miller on "A Study of

American-grown Cannabis in Comparison with Samples from other Various Sources." Extensive experiments have been in progress in various parts of the country for some time with the view to determining the most favourable conditions for cultivating these plants and obtaining drugs of uniform potency. Valuable data were submitted, and an interesting discussion on potency followed, which was regarded as a symposium on the whole subject.

The section decided to reserve the whole subject of these papers and reports for further consideration, and on Monday, September 9, it was agreed to recommend the General Meeting of the Congress to reappoint the Commission on Toxic Drugs. The Commission will on this occasion represent eight nations, Mr. Ransom being the representative of Great Britain, and Dr. Rodney H. True, of the U.S. Bureau of Plant Industry, will represent America. The Secretaries will be Messrs. Peter MacEwan (London), G. P. Forrester (Darmstadt), and Otto Raubenheimer (Brooklyn, N.Y.).

ANOTHER INTERNATIONAL AGREEMENT

was arrived at on Monday afternoon, September, 9, when Dr. Henry V. Arny (Cleveland College of Pharmacy) read the communication by Messrs. John C. Umney and E. J. Parry, in which suggestions are put forward for standardising the tests for valuing essential oils (see this issue, index folio 445). This communication created intense interest, and another on the same subject was also submitted, of which the following is an abstract:

Messrs. Paul Jeancard and Conrad Satie in their communication stated that the purity of essential oils depends upon their manufacture, and their characteristics on (1) the nature of the vegetable matter treated, (2) the method of extraction employed, and (3) the physical and chemical constants of the product obtained. Each of these three statements was considered in detail, and the need for defining the first and second as regards the standards for any particular oil was insisted upon. The authors then considered the third, describing the methods by which physical constants of oils should be determined, viz.: (1) Sp. gr. by Westphal balance and Regnault's pycnometer at 15° C. (? or 20°); (2) rotatory power (100-mm. tube at 10° to 30° C.); (3) solubility of 1 c.c. of the oil in alcohol varying in strength for different oils; (4) melting and congealing points; and (5) refractive indices and viscosity. As to chemical characters, they recommended that the following should be applied: (1) Acid-number; (2) saponification-



PHOTOGRAPH OF CONGRESS PARTY ON THE "CLEVELAND."

Among them are: Drs. Holde (Berlin), Walden (Riga), G. Goldschmidt (Vienna), Conyza (Helsingfors), M. Freund (Frankfurt), Gohwalde (Eberswalde), Hermann (Berlin), F. Ehrlich (Breslau), A. Hirsfeld (Berlin), Hofmann (Plausthal), Skita (Karlsruhe), Ebler (Heidelberg), Wiche (Berlin), and Milan Farkas (Budapest).

number; (3) ditto after acetylation; (4) ditto after formylation (*i.e.*, boiling 10 c.c. of the oil with 20 c.c. of 100-per-cent. formic acid for three hours, washing and saponifying 2 grams of the dried residue); (5) products soluble in soda; and (6) aldehyde and ketone values. The authors strongly advocated use of the same methods by all oil-analysts.

The discussion was a veritable symposium on essential oils. It was opened by Mr. W. C. Alpers, following whom Professor Edward Kremers, the successor to Dr. F. B. Power at the University of Wisconsin, and one of the leading American authorities on essential oils, spoke on the importance of the subject and the timeliness of recommendations. His remarks were supported by Mr. Clemens, and Mr. Klabers, of Schimmel's, and others also spoke. The result was that the section decided to recommend the appointment of an International Commission to be composed of chemical experts in this subject, whose duty it will be to work on the unification of approved tests for the valuation of essential oils. This matter will come up for formal settlement on Thursday, September 12.

Verein Deutscher Chemiker.

The twenty-fifth anniversary meeting of this organisation (which should not be confused with the Deutsche Chemische Gesellschaft) was reported briefly by cable last week. We have since received a report by mail, which we append. As the steamers *Washington* and *Cleveland*, by which a great many of the foreign chemists arrived, did not reach New York until late on Monday morning, most of the foreign delegates did not get to the meeting until about noon. A very hearty and cordial welcome was extended to them upon their arrival at Havemeyer Hall.

The meeting in celebration of the twenty-fifth anniversary of the Verein Deutscher Chemiker was held in Havemeyer Hall, Columbia University, New York, on Monday, September 2, and was opened by the President of the parent Society (Professor Dr. C. Duisberg, of Elberfeld), who spoke of the growth of the Verein, which was established in 1887 by twelve German chemists at Frankfurt a/Main, and now has a membership of 5,000. It was formerly called Deutsche Gesellschaft für Angewandte Chemie. The Verein is divided into twelve sections, and is composed of twenty-three branches, including four foreign branches—Belgium, Switzerland, Argentine, and United States. A branch is also to be established at Moscow. Dr. Duisberg also spoke of the celebration of the silver jubilee of the parent Society at Freiburg i/Breisgau in June.

Mr. Alfred E. Steers, President of the Borough of Brooklyn, representing the Mayor of New York, welcomed the visitors. He also referred to the adulteration of drugs and chemicals which was being attacked at present in Greater New York City, and asked the chemists to lend a hand in order to wipe out this evil.

Professor Charles F. Chandler, Honorary Chairman of the New York Section of the Verein, surprised everyone by a speech in German, and welcomed the visitors, and hoped for a successful meeting.

Professor Wegscheider, President of the Austrian Chemical Society, then spoke.

President Duisberg read two telegrams which were sent to the President of the United States and the German Emperor, sending the greetings of the Verein and the 150 foreign chemists present.

The scientific part of the programme was opened by Dr. F. Raschig, of Ludwigshafen a/Rhein, who gave a very excellent illustrated lecture on

THE SCIENTIFIC AND TECHNICAL IMPORTANCE OF TAR PHENOLS.

Dr. Raschig gave an historical introduction, starting from the German apothecary Runge, who discovered phenol and aniline in coal-tar in 1834. He spoke on the different phenol and cresol preparations and compounds, and demonstrated various chemical tests and experiments. He also described a new method of assaying metacresol in the compound cresol preparations, such as saponated cresol and lysol. He surprised many by the statement that at present coumarin is prepared from orthocresol, aubipin from paracresol, and artificial musk from metacresol. He then took up a rather new problem—namely, the analysis of "Baekelite," and showed specimens of this new phenol-formaldehyde condensation product, which promises to replace amber, ivory, etc. His thorough knowledge of the chemistry of "Baekelite" even surprised the inventor, Dr. Baekeland, who was in the audience.

Before the Congress on Tuesday Professor Duisberg showed two excellent specimens of motor tyres made of synthetic rubber manufactured at Elberfeld.

British Association.

THE eighty-second annual meeting of the British Association for the Advancement of Science was concluded at Dundee on Wednesday afternoon, September 11. The meeting (writes our local correspondent) has been highly successful. All the arrangements reflect the greatest credit on those concerned. The visitors began to arrive on Tuesday, September 3, and by Wednesday had made a strong muster. The Albert Institute was an ideal reception-room. The large hall, being specially arranged for business purposes, presented on most days a novel and remarkable spectacle, while the picture-galleries beyond were supplied with every convenience for resting, writing, conversation, or refreshment. The President had a splendid audience in the Kinraid Hall on Wednesday evening, September 4, but it was judged that the palm for eloquence belonged to the Lord Provost (Mr. Urquhart), when, in a few sentences, he announced the gift of 10,000*l.* by Dr. Caird. Satisfactory arrangements had also been made for the sectional meetings, in many of which the Associate members found something to interest them.

The meetings have caused unusual stir and bustle in streets radiating from the reception-room. A tantalising element, shared in by the assiduous camerist, was the uncertainty as to the identity of many of the distinguished visitors.

As was to be expected, chemists had a considerable addition to the number and variety of their clients. Many unusual things were asked for, while the number of 12-oz. mixtures to be taken in 1-oz. doses was decidedly above the local average. The most popular mixture, however, seems to have been the one prescribed by Horace for his illustrious friend—

Misce stultitiam consiliis brevem.

Sign: Dulce est desipere in loco.

Od. iv. 12.

(Mix a little folly with your graver counsels. It is a good thing to relax on occasion.)

At a meeting of the General Committee on Friday, September 6, Sir William White, K.C.B., F.R.I., was elected President for the meeting in Birmingham next year. Professor Perry, in moving that the best thanks of the Association be conveyed to Dr. Caird for his generous gift, remarked that, while for help to the Physics and Engineering Sections he always knew where to apply, it is extremely difficult to interest the general public in others, such as the Biological Section. This gift, being unconditional, is the cause of much satisfaction to themselves and to the generous donor.

THE ORIGIN OF LIFE

was discussed at a meeting of the Zoology and Botany Sections on Tuesday. It illustrated the hopeless state of disagreement of biologists on this subject. Professor Minchin, F.R.S., in introducing the discussion, differed from most scientists in considering chromatin substance, and not cytoplasm, as the primary and essential living substance. Professor Wager said the more the lower forms were studied the more remote became the possibility of conceiving how life arose. Professor F. W. Keeble pointed out that both Professors Schäfer and Minchin refused a definition of life. Professor Macallum, of Toronto, thought with Tyndall that matter is endowed with potentiality of life, while Professor Benjamin Moore considered colloids under the influence of sunlight to be Nature's beginning in synthesising organic bodies, and that the process is going on now. Dr. J. S. Haldane regarded the whole of evolution and knowledge of its progress as the gradual conquest of the inorganic world by the advance of knowledge of the organic world. Life was to him absolutely *sui generis*. Dr. Chalmers Mitchell characterised Dr. Haldane's prophecy that they would find the whole of the inorganic world was life as mere verbal nonsense. The subject has brought the Association as great publicity as did Huxley's notorious declaration on a previous occasion that the bed of the ocean is potential protoplasm.

THE CHEMISTRY SECTION

has this year had as its President a chemist who at one time was very well known to English pharmacists—



PROF. SENIER.

Professor Alfred Senier, M.A., Ph.D., D.Sc., of the University College, Galway. He is an Englishman by birth, but as a boy found himself in the United States, where he had a university education at Wisconsin and Michigan Universities. Returning to England, he became assistant to Professor John Attfield at the School of Pharmacy in 1874 and remained there for eight years. During that time he acted as Assistant Secretary to the British Pharmaceutical Conference. In 1884 he went to Berlin as a research student with von Hofmann, remaining until 1887, when he married a daughter of Justizrath H. F. Wagner. In 1890 he was appointed to take charge of the chemistry department of Queen's College, Galway, and in the following year was promoted to the Professorship. The articles on drugs and allied products in Thorpe's "Dictionary of Applied Chemistry" are from Professor Senier's pen. In his

Presidential Address,

delivered on September 5, Professor Senier spoke in the first part on the nature and method of chemistry, maintaining that the logical method by which chemistry advances is not a simple one, but requires as one essential element the use of a highly developed imagination. In the second part, he, in order to account for certain isomeric and other phenomena, proposed the conception of solid molecular aggregates, supposed to be formed by the combination of gaseous molecules just as the latter are formed by the combination of atoms. In the third part of the Address he insisted that our educational resources devoted to chemistry should be directed, in the first place and chiefly, to the highest possible training of promising students in the prosecution of research, and that the giving to the many of elementary instruction should be at least a secondary consideration. In the course of this part he mentioned some concrete applications of science.

There is scarcely an industry or a profession (he said) that has not been materially influenced or even created by the discoveries of chemistry, and therefore the welfare of nations is most intimately concerned in promoting its advancement. Now, it is common knowledge that no country has appreciated this to the same degree as Germany. It will, therefore, be worth our while to consider a moment the inauguration in Berlin, a year ago, of an entirely new institution, the Kaiser Wilhelm Institut, for the promotion and organisation of chemical research. This research is to be effected throughout the German Empire, in the universities, the technical high schools, or in works, and it is supported mainly, at least at first, by subscriptions of the chemical manufacturers. An address of very great importance was delivered at its opening by Professor Emil Fischer, than whom, perhaps, no one living has added more to the progress of chemistry. In this address an authoritative account is given of the main contributions of chemistry to the national welfare, which even to those familiar with the subject must be astonishing in their importance, variety, and universality. It includes the applications of the science to problems of nourishment, to agriculture, and food supply; to engineering, metallurgy, cements; to clothing, artificial silk, or to colouring—dyes; to indiarubber production, both natural and artificial; to perfumery—artificial violet and other artificial floral perfumes, even that of the rose; to synthetic camphor; to drugs and synthetic materia medica, including the recent arsenic and selenium organic compounds which promise so much in the treatment of cancer and other fatal diseases; to radio-activity, to therapeutics, to the destruction of pathogenic microbes; to methods of sewage disposal; to the preparation of efficient explosives; and to

many other useful objects. In connection with the manufacture of explosives the public should know that the ability to wage war is becoming more and more dependent on the work of chemists. When supply of mineral nitrates is exhausted, or even before that event, the requisite nitrogen compounds will have to be provided in some other way, and almost certainly they will be obtained synthetically from the atmospheric gases which even now are becoming a commercial source.

Proceeding, the Professor spoke of the time-spirit and science, and present indiscriminate elementary teaching and neglect of research, and in concluding he said:

I have in this Address endeavoured to give some account of the sort of thing chemistry is—of its method—and to maintain three theses:

(1) That the logical method by which chemistry advances is not a simple one, and requires as one essential element the use of a highly developed imagination. To render this more efficient I have advocated special training.

(2) Without violating, I hope, the canons of the proper use of hypothesis, I have proposed, in order to account for certain isomeric and other phenomena, the conception of solid molecular aggregates, although I am not able at present to indicate precise methods for its further investigation. These molecular aggregates are supposed to be formed by the combination of gaseous molecules just as the latter are formed by the combination of atoms.

(3) As a matter of vital interest to the continued well-being of this country, I have insisted strongly that our educational resources devoted to chemistry should be directed, in the first place and chiefly, to the highest possible training of promising students in the prosecution of research, and that the giving to the many of elementary instruction should be at least a secondary consideration.

Now, I do not wish to dictate how this last proposition could be best carried into effect. I think we should distinguish three classes of chemists, or technical chemists, whose domains would more or less overlap. Occasionally there will be a man, like the late Sir William Perkin, who would combine all three. The three classes are: first, the pure chemist, devoted to scientific discovery only; second, the technical chemist, who prepares the discoveries of the pure chemist for the technologist, and has to determine such questions as economical production and, for example, the conversion of colours into dyes; third, the technologist or works manager. These three classes should be in close relation to one another. By such a scheme we should probably overcome by education one of our most serious present difficulties—the ignorance of owners of works of the value of science.

PAPERS

were read before the Chemistry Section on September 6, 9, and 10. Few of them were of medical and pharmaceutical interest. Reports on enzymes and discussions on sugars were features, also a discussion on Monday with Section A (Mathematics and Physics) on the atomic heat of solids. The following are titles of papers which it may interest some of our readers to follow up:

(a) The Enzymes of Linum; (b) Variations in the Flax Plant with Locality (Dr. J. V. Eyre).

Action of the Enzymes of Emulsin on Amygdalin and Vicianin (Mr. A. Compton).

(a) The Action of Bromine on Strychnine; (b) Pentaerythritol Tetranitrate (Professor C. R. Marshall).

Phototropy and Thermotropy (Professor A. Senier).

To the Physiology Section Professor C. R. Marshall communicated a paper on

The Pharmacological Action of Nitric Esters.

He has prepared and investigated a large number of these substances, which he divided into four groups:

- (i) The nitric esters of the monhydric alcohols.
- (ii) The nitric esters of the polyhydric alcohols and sugars.
- (iii) The nitric esters of starch and cellulose.
- (iv) The nitric esters of the acids and their alkyl compounds.

The members of the last two groups do not produce the characteristic vaso-dilatation of most nitric esters. The first group are relatively weak vaso-dilators. Methyl nitrate, for example, injected intravenously, is more than ten times weaker than glycerol trinitrate, and when administered by the stomach to man is more than a hundred times weaker. They can be given in sufficiently large doses to rabbits to produce unconsciousness without causing death. The vaso-dilating action of the remaining group (the nitric esters of the polyhydric alcohols and sugars),

considering their solubility, is powerful. The differences exhibited by the various substances are mainly quantitative and are largely due to the differences in solubility of the substances in aqueous media. The presence of hydroxyl groups, however, diminishes the action of a substance as compared with the fully nitrated compound very considerably.

Section H, devoted to Anthropology, rarely has contributions from pharmacists, Mr. J. F. Tocher's surveys being hitherto the most notable. On the present occasion Mr. Henry S. Wellcome, on Tuesday afternoon, September 10, followed Professor Flinders Petrie's communication on Early Dynastic Discoveries in Egypt, with a discourse on the Discovery of Remains of

PRIMITIVE ETHIOPIAN RACES IN SOUTHERN SUDAN.

During an expedition to the Anglo-Egyptian Sudan in the winter of 1900, soon after Lord Kitchener's conquest, Mr. Wellcome discovered some neolithic objects, and he took the first opportunity (1910) of pursuing the matter thoroughly. Encouraged in the investigation by Sir Reginald Wingate, the Governor-General, he chartered a dahabeah at Khartoum, cruised up the Blue Nile, and explored the eastern and western banks for some distance, finding several sites of ancient settlements. Returning, he halted at Sennar, then trekked westward to a



MR. H. S. WELLCOME'S EXCAVATION CAMP AT GEBEL MOYA.
Mr. Wellcome is seen in the centre giving in the early morning directions for the day's operations.

range of granite hills, known as Gebel Moya, lying about twenty-five kilometres from the Blue Nile. After examination of the district Mr. Wellcome applied for and obtained official authority to excavate. A camp was formed at Gebel Moya, whose inhabitants were described, and the turbulence that the author had to quell from time to time among them, for he had to employ them in his excavation work. Otherwise, for the first season, he was single-handed; afterwards he had the assistance of Mr. Schliephack and trained excavators, as well as others later. As a result many stone implements have been discovered, stone arrow-heads, pottery in great variety, primitive figures of clay, beads, amulets, lip and ear ornaments, remains of workshops, and cartouches ranging from about 700 B.C., besides copper, bronze, and iron objects. No parts of the site are of later date than the Ptolemaic period. Mr. Wellcome gave a graphic account of the work and men engaged in it, including six hundred natives. He is continuing the research.

The paper was well illustrated with lantern-slides, as well as an interesting collection of arrow-heads, ornaments, pottery, and other objects mentioned. Of ornaments there was great variety, especially of lip-studs and ear ornaments. These peculiar lip-studs were worn in the lower lip, and in order to be worn two incisor teeth had to be withdrawn. At the conclusion of his lecture Mr. Wellcome called upon Dr. Derry to explain some photographs of human remains. Dr. Derry, who was with Mr. Wellcome last winter when some of the more important excavations were made, is a skilled anthropologist. He pointed out that the remains are of a race of

extraordinarily large people; few of the men could have been less than 6 ft. 3 in. in height. One of the parts excavated is an ancient cemetery, where the graves were found near the surface. The bones were partially spoiled by water. The soil contains an unusually large amount of silica, and with the heavy rains the bones tend to become silicated or slightly fossilised, this rendering the bones very hard and brittle. The skulls exhibit certain peculiarities, and are of the negro type, this being especially noticeable in the female skull. The lower jaw is very massive.

PHARMACEUTICAL SOCIETY OF IRELAND.

Council-meeting.

THE Council met at 67 Lower Mount Street, Dublin, on Wednesday, September 4, Mr. John Smith presiding, in the absence of the President and Vice-President. Dr. Chas. J. B. Dunlop, Messrs. Thomas Batt, Richard Blair, J. Burnett, G. D. Beggs, Wm. Doig, James Michie, James Tate, and W. F. Wells were also present.

ILLNESS OF THE PRESIDENT.

THE CHAIRMAN gave expression to the regret of the Council at the continued illness of their esteemed President, Sir William J. Baxter, who had been seized with illness at Glasgow on his return from the British Pharmaceutical Conference at Edinburgh. He was improving slowly. The Chairman was sure that they all felt very much for Lady Baxter and her family in their trouble, and he moved as follows:

"That the Council at their stated monthly meeting wish to express to the President, Sir Wm. Baxter, their deep sympathy with him in his illness, and hope he may soon be restored to health again."

MR. WELLS seconded the motion. He had met Sir William at the Conference, and he had seemed in his usual good health. He was very sorry to hear afterwards of his rather serious illness, but he was glad to know that he was improving. It was expected that he would soon be able to travel home. It was fitting that they should express their sympathy with Sir William and the hope that he might soon be restored to health and be able to be with them again. (Hear, hear.)

The resolution was passed unanimously.

CORRESPONDENCE.

THE REGISTRAR submitted a letter from the Colonial Office with a copy of an Act of the Legislature of the Leeward Islands, entitled "An Act to Amend 'the Medical Act, 1903,'" and stating that the Secretary of State would be glad to receive any observations that the Society may wish to offer on the Act. The communication was referred to the Law Committee.

MR. FERRALL also submitted a letter from the Irish Privy Council Office transmitting copies of an Order in Council approving of the new regulations regarding the Preliminary and Pharmaceutical Licence examinations; and a letter from the Pharmaceutical Society of the Netherlands, inviting the co-operation of the Pharmaceutical Society of Ireland in arranging for an International Pharmaceutical Congress at The Hague next year.

The Registrar read a letter from Dr. John Andrew Molyneux, submitting certificate of registration of an additional qualification—viz., Licentiate of Apothecaries' Hall, Dublin, 1911—and desiring registration as a pharmaceutical chemist. The communication was referred to the Law Committee.

PRELIMINARY REGISTRATION.

MESSRS. Ernest Walter Leach and Peter Macarthur wrote submitting certificates from other bodies, and desiring preliminary registration. Both applications were granted.

DEATHS.

THE REGISTRAR submitted certificates of the deaths of Mr. M. G. Carroll, Ph.C., of Boyle, co. Roscommon, and of Mr. Wm. Laird, Ph.C., of Dublin. He also notified the death of Mr. Francis J. Minchin, Ph.C., formerly of Athy, and at one time a member of this Council.

OTHER BUSINESS.

Thanks having been accorded to THE CHEMIST AND DRUGGIST for a copy of "The Chemists' Dictionary of Synonyms and Trade Names" and to the Ontario College of Pharmacy for its publications, the reports of the Examiners, the Law Committee, the House Committee, and the School Committee were received.

Communications were received from the following notifying changes in their addresses:

Mr. Robert J. Dillon, Ph.C., to Loughrea Pharmacy, Main Street, Loughrea, co. Galway.

Mr. Thos. E. Dixon, Ph.C., to Speechly House, Karachi, Sind, India.

Mr. H. N. Forsythe, Ph.C., to the Central Pharmacy, Hamilton, N.Z.

Mr. S. J. Hamilton, Ph.C., to Box 198, Barberton, Transvaal, South Africa.

Mr. M. O'Brien Leahy, Ph.C., to the Pharmacy, Bridge Street, Dungannon.

Mr. T. M. O'Connor, Ph.C., to O'Connor's Medical Hall and Dental Surgery, 22 Patrick Street, Mountmellick.

Mr. Beggs and Mr. Burnett were appointed Scrutineers of the ballot for the Council-election next month.

The pharmaceutical licences of Wm. Carr, Hanora M. Dooley, J. Downey, G. W. Hawthorne, Joseph Kelly, T. J. May, John Mullin, F. E. Preston, P. Ronaghan, J. F. Seale, and Margaret Sutton were ordered to be sealed.

Mr. Joel Green, Ph.C., 6 Walworth Road, South Circular Road, Dublin, and Mr. Wm. Sinclair Taylor, Ph.C., the Medical Hall, Enniskillen, were elected members of the Society; and Mr. Thos. J. May, Ph.C., Whitehead, and Mr. David O'Sullivan, Ph.C., Inchicore, Dublin, were nominated for membership.

Council-election, 1912.

Intending new candidates for election to seats on the Council should note that their nomination-papers must be in the Registrar's hands by 12 noon on September 23.

October Examinations.

Applications for the undermentioned examinations should be lodged with the Registrar, Mr. Arthur T. Ferrall, 67 Lower Mount Street, Dublin, by 11 A.M. (at latest) on the respective dates: For Preliminary examination, on Thursday, September 19; for Registered Druggist examination, on Tuesday, September 24; for Pharmaceutical Licence examination, on Wednesday, September 25; for Pharmaceutical Assistant examination, on Saturday, September 28.

BUSINESS CHANGES.

Notes for this section sent to the Editor should be authenticated, and must not be in the nature of advertisements.

BOSUSTOW'S DRUG-STORES, 208 High Road, Chiswick, are now, and have been since July, carried on by Mr. E. Wolfe, and not by Mr. C. A. Lewis, as inaccurately stated last week, a circumstance which we regret, particularly as Mr. Wolfe informs us that the statement has caused him considerable annoyance. He has no connection with Mr. Lewis, the late owner of the business.

MR. JAMES ANDERSON, formerly of Basingstoke, has purchased and is now carrying on the pharmacy of Mr. S. H. Prior, 60 High Street, Beckenham, Kent. Mr. Prior is leaving for Australia this month.

MR. C. J. OATES, formerly with Messrs. Oldfield, Pattinson & Co., Manchester, has opened a high-class pharmacy at 4 Marlborough Gardens, Manchester Road, Southport.

MESSRS. TOPPING BROS., cash-store pharmacists, are removing from 34 Church Street, Preston, to larger and more convenient premises at No. 31 in the same thoroughfare.

MESSRS. FELICE BONAVENTURA & Co., merchants and importers, have removed from 8 St. Mary-at-Hill to Chesterfield House, 98 Great Tower Street, London, E.C.

MR. JOHN HOLMES, Ph.C., has sold his business at 2 Duckworth Lane, Manningham, Bradford, to Mr. George Penty, chemist and druggist.



Postal Address:
C. & D. INFORMATION DEPARTMENT, 42 Cannon Street, London, E.C.
Telegraphic Address: "CHEMICUS LONDON."
Telephone No.: BANK 852 (two lines).

INFORMATION WANTED.

We would be obliged if any reader would inform us by post-card or telephone who are the makers or agents of the articles mentioned in the following inquiries:

- 45/59. "Gargol": supply.
- 41/120. Hunter's toilet-roll.
- 43/53. "Capsicol": makers.
- 38/56. Hollis's rouge-powder.
- 45/45. "Cystoform": supply.
- 43/720. "Succarine": makers.
- 41/121. "Alblak" safety-razor.
- 45/41. "Xanthoform": supply.
- 39/55. "Lemon" bath-soap: makers.
- 44/64. "Payne's Reagent": makers.
- 41/12. "Carter Mossette" magnetic belt.
- 37/19. "Meriston": a cure for cancer: supply.
- 41/14. Muthien inhaler: maker or supplier.
- 43/74. Perla's "Olivets": address of suppliers.
- 43/72. "Prophylaso" (in tubes): who supplies.
- 42/32. "Maud S." condition powders: suppliers.
- 41/32. "Pyalin" or "Ptyalin" tablets: supply.
- 45/49. Chloride of lime: packers of penny bottles.
- 39/24. "Brydestile": what is it and who supplies?
- 43/45. Dr. Kennedy's "Drunkard's Friend": supply.
- 42/51. Dr. Doyer's Remedy (French) for foot-and-mouth disease.
- 42/33. "Lasting" hair-restorer ("Piccadilly Circus"): who makes?
- 44/46. English agents for "Kadi" (Dastoor Specific Co., of Bombay).
- 41/15. Chase's Remedy Co., formerly of Cockspur Street, W., and City Road, E.C.: address.

INFORMATION SUPPLIED.

During the past week we have answered inquiries as to the makers or sellers of the following articles. The information will be repeated to other inquirers who send to this Department a stamped and addressed envelope for the purpose.

- Alabone's chest treatment, 43/30
- Alvatunder, 41/30
- "Anthrastol," 39/26
- "Antiformin," 39/12
- Bentley's weed-killer, 43/32
- Binn's nickel small-combs, 42/72
- Budden's skin-ointment, 38/11
- Coate's hair-brushes, 42/25
- "Common Sense" rat-exterminator, 40/59
- "Daisy" fly-killer, 239/14
- Darasse freres (Lactobacilline), 42/31
- Ektogen, 42/22
- Essigsauere Tonerde, 31/1
- Floriline dentifrice, 38/24
- Fuller's earth (3-cwt. lots), 41/19
- Harrison's pomade, 41/29
- "Helios" vacuum flasks, 41/12
- "Holdfast" soothers, 40/74
- Horsehair socks, 41/33
- Kylox, 41/13
- Massage vibrators, 41/592
- Melanyl, 43/73
- Mercurial mitin, 41/32
- Metal hot-water bottles, 33/51
- "Mother's Help" soothers, 38/36
- "Mothine," 39/25 and 44/15
- "Mysantal" tooth-brushes, 42/30
- Naphthaline cones, 38/27
- "Near-Kid" rubber gloves, 42/52
- "Nova" spray producer, 38/10
- Palatine Dental Manufacturing Co.'s goods, 43/48
- "Parolax," 39/11
- Perfumery boxes, 40/590
- Pernatrol soap, 41/320
- "Persit," 39/27
- Photo-frames (wooden), 39/33
- Postal tubes (wooden), 41/152
- "Preventum" tooth-brushes, 44/4
- Ptyalin, 41/320
- Radio-active waters, 38/72
- Rice-starch in powder, 40/591
- Rodagen, 42/49
- Romilet safety-razor, 32/31
- Salt's kidney-belts, 41/150
- "S.B.R." telescopes, 34/59
- Shaving-sticks (with chemist's name), "Fig. 810" (French inquiry), 41/34
- Sight-testing cases, 42/50
- Stolz electrophonic, 38/4
- Sulfoform, 41/31
- Taylor's sachets, 41/291
- "Tiz," 42/43
- Tucker's Pharmaceutical Co., 39/13
- Ung. pini sedativ., 41/10
- Wilson's "Common Sense" ear drum, 38/4
- Zomol, 41/290
- Zundra, 41/15

OBSERVATIONS & REFLECTIONS

By Xrayser II.

Dr. Schäfer's Theory of Life

as a chemical process is naturally exciting a good deal of attention, though it is alleged by several of our leading scientists to be no novelty and of no real importance—in short, to be neither new nor true. I do not presume to speak as a chemist, but there are some obvious censures (to use the word in its older sense) which even the ordinary reader may venture to pass upon this theory. The first and most obvious of all is that the occurrence of similar phenomena in animate and inanimate matter—a distinction which may, I suppose, still be allowed us—does not necessarily prove the presence of the same cause in both; the second is that physical science knows nothing of life except as it is linked with physical processes, any causative force there may be behind these is as much out of the scientist's ken as out of that of any one of us. Not only is this true now, but it must always remain true. Even if the chemist succeeds in producing what Sir Oliver Lodge calls

"The Material Basis of Life,"

what others have called "the life-compound," he will, as Sir Ray Lankester says, but have produced "something which exhibits the usual phenomena associated with life." We shall still be left asking, What *is* life? That he will ever do as much as this is, according to Dr. Russel Wallace, incredible. The criticism of Sir Oliver Lodge shows, perhaps as well as anything that has been said on the subject, how confused and contradictory the opinions of scientists are as to what life is. He distinguishes between life and vitality, which Dr. Schäfer does not. "I myself," he says, "employ the word 'vitality' to signify the interaction of life and matter, and keep the word 'life' for the something which so interacts [with matter]." Evidently he is right in thinking that "life" still needs definition, and that Dr. Schäfer's Address will have for one of its results confusion arising from misunderstanding with regard to terms. We might reverse his own terms and say that "vitality" means the principle of life and "life" the possession of vitality, the condition of being alive. In fact, this is what ordinarily we do say.

The Repetition of Prescriptions

is a subject of perennial interest to pharmacists, and one on which, as I have said before, it is impossible to lay down a rule of universal application. There is one point which is generally overlooked in discussing it, and though this is suggested it is not fully brought out in your note to Mr. Percy Nowell's letter. The practitioner in full charge of a case, seeing his patient regularly, and treating him continuously for a disease that demands different medicines at different stages, has a right to demand that his prescriptions shall be repeated only by his own order, and a right to complain if, after his patient's recovery, prescriptions written for that particular case are used again when apparently similar cases arise. He is not paid for his prescriptions, but for his general treatment, of which the medicines prescribed are a part, and the patient has no more right to regard the prescriptions as his own property than to consider that the fact of having once paid for treatment entitles him to the benefit of the prescriber's skill in similar cases for all time. The pharmacist certainly has no property at all in prescriptions; they are his only to

dispense when ordered. But as between the specialist (who is consulted, it may be, only once) and his patient, the case is not the same. The specialist receives a fee in return for a prescription, and there in most cases his responsibility ends. These are usually chronic cases, and it seems to me that there is no "sin," though there may be folly, in using the prescription whenever, as Mrs. Gamp says, one is "so disposed."

A Sliding Scale

in the charges for club prescriptions, such as is referred to in your article on "Sick-club Dispensing in Austria," is at the best only a makeshift, but in certain circumstances it might have advantages. It is an obvious admission that sick-club dispensing, of itself, will be conducted at a loss, and that the only chance of making both ends meet in the dispensing department is to make private customers pay for the profit that ought to have been made out of the club people. The actual working of such a scheme, where pharmacists are independent of each other, would mean that pharmacists in poor localities, where the vast majority would naturally belong to the sick club, would get more for the club dispensing than their more fortunate *confrères* in richer localities. From this we reach the *reductio ad absurdum* that the poorer the district the higher would be the cost of medicine. If, however, the entire transactions of a community embracing both rich and poor be pooled the hardship would be minimised, and if such a scheme were worked in connection with our Insurance Act it might prevent the occurrence of the more glaring instances of the injustice that is bound to press heavily on some in any event.

The Pharmacology of Digitalis

has probably received more attention than that of any other drug, and yet it is surprising how small is the actual knowledge we have regarding it. Nevertheless, certain basic principles seem now to be well established, as, for example, the statement by M. Busquet, of the Paris School of Pharmacy, reported in your last issue, that there exists a difference in the mode of action on the heart between an extract of digitalis and the chemical products of the drug. This is, of course, no new discovery, but its reaffirmation may be expected so long as there exists so much confusion regarding these so-called active principles. At present there is no agreement among pharmacologists either as to the composition, properties—physical and therapeutical—or even the nomenclature of digitalis glucosides. For instance, we are told of one brand of digitalin that it is quite safe in doses of $\frac{1}{10}$ grain, while of another the dose is only $\frac{1}{320}$ grain, the toxicity of the latter being nearly as great as that of aconitine. Is it surprising that medical men steer clear of such diverse products? It appears now to be agreed that a test on animals is the only one that is satisfactory for digitalis; but there is still much more to be learned, and the average pharmacist may well be excused if in regard to digitalis and its principles he declines to commit himself.

Suppositories

were known to Hippocrates, and when Dr. Douglas Freshwater says that they were in use "as long ago as 1884" he must be supposed to be speaking of some particular kind, not of suppositories in general. It is rather curious, considering the length of time in which they have figured in practice, that they do not appear in any of our old Pharmacopœias, whether of London, Edinburgh, or Dublin, though they are included in several of our Dispensatories. They were sometimes, from their shape, called Glandes, or Glandes Suppositoriæ. Quincey's Suppositorium primum consists only of rock-salt and honey; in his Suppositorium alterum hiera picra is added to these ingredients. Alleyne recommends the aromatic aloes pill in this form, and adds, "Many also make use of a common candle." Rennie gives the formulæ of four or five suppositories, none of them official, and recommends soap, suet, cacao oil, and inspissated honey as vehicles.

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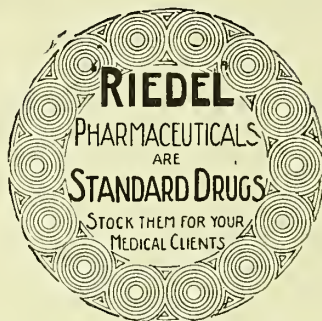
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Editorial Articles.

Drug-culture.

WE publish to-day two communications to the International Congress on Applied Chemistry on the cultivation of belladonna in England and the report of the International Committee on Toxic Drugs, which have been discussed in the Pharmaceutical Chemistry Section of the Congress. These documents were written and communicated before Sir Edward Evans, in his Presidential Address to the British Pharmaceutical Conference, spoke on the subject of drug-culture, but in a measure they may be regarded as the first step in anything of a national character that may be done in this important *petit culture*. The communications not only record most interesting results from varied methods of growing belladonna, but they bring together the gist of what has been recorded on the subject here and elsewhere; and we do not doubt that pharmacists, especially those engaged in manufacturing, will perceive the importance of the observations made at Hitchin and near Dartford, especially as they deal so well with the yield of the plant under different conditions of culture and the alkaloidal value of the different growths of plant. Differences are observable in the two communications, as might be expected, but co-ordination of the conditions should remove the

differences, which do not, however, introduce any variation in principle. The experiments are most encouraging, but it would be a mistake to regard them as final; they are a beginning, and a very good one at that, of an endeavour to ascertain by scientific methods what are the most favourable conditions for growing belladonna of the best quality in England. It may take a dozen years or more to obtain a definite answer, particularly if the economic question is considered by extending the proposition to read: What are the most favourable *paying* conditions for growing belladonna of the best quality in England? A point may be reached when State assistance, as from the Development Committee through the Board of Agriculture and Fisheries, may be necessary; also there are other drugs to be considered, digitalis especially. We learn from Professor Remington, who is watching this subject with keen interest, that similar work to that on belladonna is being done on digitalis in the United States, and reports on it were included in the symposium on toxic drugs which took place. The Pharmaceutical Chemistry Section is recommending the reappointment of the International Committee on Toxic Drugs and to add to it Dr. Rodney H. True, whose work on the cultivation of medicinal plants in the United States is well known, and who has Government resources at his disposal which are in many respects unique.

Lemon Oil.

It will have been noticed from our Trade Report that a rapid advance has lately taken place in the price of lemon oil in Sicily, but whether it is entirely justified is an open question. Speculators in that island appear to have had matters much their own way and have not hesitated to take advantage of any important buying to drive up prices. It will be remembered that the new crop for December-March or January-March delivery opened this season at the comparatively high price of about 5s. per lb., which compared with about 3s. per lb. in the previous year. This figure was considered unworkable by many buyers, and practically little business was done at what eventually proved to be a very low price, for after a slight reaction an upward movement took place in August which was chiefly engineered by speculators, this being based on the reports of shortage of the lemon-crop. The following figures represent the advance in c.i.f. prices of new crop for December-March and January-March shipments: June, 5s. 2d. to 5s. 4d.; July, 6s. 2d. to 6s. 6d.; August, 6s. 2d. to 6s. 9d.; September, 7s. 2d. to 7s. 5d. It must be said that during August and September, with an excited market and speculation very rife in Sicily, there was a general disposition on the part of buyers to anticipate their wants, and a large business has been done. In view of the Italo-Turkish War Germany had been holding off as long as possible and had practically boycotted the article; but recent advices show important buying of the new crop from that quarter, and last week we reported that American purchases had also stimulated the market. It is now said that the crop of lemons is some 40 per cent. shorter than last year, but how true this is cannot be stated. There are others who believe that ere long the price of new crop will be from 10s. to 12s. 6d. per lb., but there is still a considerable margin between 7s. 5d. and 10s., and naturally it is to the interest of those who have paid these high prices to take advantage if possible of a further rise in values. It is true there is very little oil on the spot, and it will be

quite four months before new oil is available. There is no doubt that as a result of the deplorable weather this summer the consumption of lemon oil both in this country and on the Continent has been much less than usual, and the result is that everybody carried on their business with a minimum of stock. If the consumption had been normal this season the probable price, it is said, would have been nearer 15s. Looking at the changed economic conditions in Sicily it appears to us as if the days of cheap lemon oil—say from 2s. 6d. to 3s.—will not return again. This is because the lemon-growers are becoming more prosperous as the result of reduced production and the closer control exercised by the Camera Agrumaria, which appears at last to be overcoming the great difficulties which marked its initiation. The improved position of citrate of lime has naturally had a marked influence on the market of the derivatives of the fruit, especially on that of oil of lemon. Considering the fact that Sicily is the only producer of lemon oil, it would have been thought that at the comparatively high prices ruling during the past two years some encouragement might be given to the West Indies to interest themselves in the culture of lemons on an extensive scale; but nothing appears to have been done. Jamaica orange oil is a competitor with Sicily, helps to keep down the price, and has a regular sale. Why should not the same apply to lemon oil?

"Such As."

CHEMISTS AND DRUGGISTS in Great Britain are familiar through bitter experience with the disadvantages of vague phraseology in Acts of Parliament, and not less than any other class of the community do they object to legislation by reference. There is an interesting example of the kind in a new provision respecting the sale of medicines in the Leeward Islands, that cluster of five islands constituting the eastern part of the West Indies, which have a population between 125,000 and 150,000, and whence come lime-juice and other valued products of a medicinal nature. There an Act to regulate the qualifications of practitioners in medicine, surgery, dentistry, and the sale of medicines was passed in 1903. It required those engaged in the retailing of medicines to be licensed after proof of qualification; but patent medicines, senna, Epsom salts, and castor oil might be sold by unlicensed persons. A new Act has received the approval of the Governor, in which unlicensed persons are empowered, as will be seen by the subjoined text, to retail in future "medicines such as quinine, senna, Epsom salts, castor oil, and carbonate of soda." This extension may become of dimensions in accordance with the acuteness and enterprise of the unlicensed individuals. Thus cascara sagrada and rhubarb are medicines such as senna, and there are others. The new provision is as follows:

The following section is substituted for Section 5 of the 1903 Act:

5. (1) No person shall be entitled to compound, dispense, or sell by retail medicines (except those commonly called patent medicines and medicines such as "quinine," "senna," "Epsom salts," "castor oil," and "carbonate of soda") unless

(a) he shall be entitled to do so according to the law for the time being in force in the United Kingdom, or unless

(b) he shall obtain a licence from the Governor in that behalf.

(2) Such licence shall carry a stamp-duty of two pounds.

(3) No such licence shall be granted to any person except on the production of a certificate, given by two duly qualified medical practitioners, that the person applying for the licence has served an indentured apprenticeship with a duly qualified medical practitioner or a duly qualified

dispenser of medicines, resident in the Colony, for a period of three years, and is fully competent to compound and dispense medicines.

(4) No such licence shall be granted to any person under the age of twenty-one years.

(5) Nothing in this section shall prevent any duly qualified medical practitioner from compounding, dispensing, or selling medicines by retail.

(6) Nothing in this section contained shall affect the position of those holding licences granted by the Governor prior to the operation of this Act.

It will be interesting to watch developments under the new provision. We also observe that the old phraseology as to dispensing under Sub-section 3 has been changed from "qualified to dispense medicines according to the British Pharmacopœia." The new phrase, "fully competent to compound and dispense medicines," is better. A provision in Section 6 is to the effect that persons cannot recover charges for medicines if they (the sellers) are not qualified remains. Many will regret that the principle is not imported into the United Kingdom. We may also note that the fine for acting contrary to the statute is not to exceed 100*l*.

The Boom in Trade.

It was conceded that the Board of Trade Returns for July were exceptionally good, showing as they did an increase of nearly sixteen millions sterling; but the August figures, which show a total increase of twenty millions, easily surpass them. The imports rose by 9,138,047*l*., or 18 per cent., to 16,386,203*l*., and the exports of British goods rose by 7,696,021*l*., or 21.3 per cent., to 43,778,721*l*.; while the exports of imported goods rose by 3,308,628*l*. to 9,957,760*l*. The considerable increase in re-exports is partly attributable to the release of goods held up at the Port of London during the labour strike, but the increase in British exports by 7.7 millions is remarkable. It should be remembered, however, that in August 1911 business was considerably interfered with by the railway strike, so that the comparison is not quite equal. High values also help to swell the totals, but in spite of these the quantities are much higher than a year ago. The features of the imports include an advance in foodstuffs and tobacco by 2,202,693*l*., raw materials and mainly unmanufactured articles by 3,523,303*l*., and manufactured articles by 3,378,666*l*.; out of thirty-four enumerated sections there are only two minus signs, and these quite insignificant. Among manufactured articles, chemicals and the like increased by 209,649*l*. to 1,147,944*l*. The increases apply to twenty-three articles amounting to 262,004*l*., and the decreases to ten articles amounting to 52,355*l*. The largest expansions are in unenumerated potassium compounds by 54,248*l*. and painters' colours and pigments by 45,870*l*. Cream of tartar is up by 4,077 cwt., or 15,757*l*.; tartaric acid by 737 cwt., or 4,523*l*.; glycerin by 2,192 cwt. (but value decreased by 351*l*.); and quinine and quinine salts have advanced by 112,136 oz., or 4,798*l*. Among the declines are acetic acid, other than for table use, by 1,027 cwt., or 1,023*l*.; brimstone by 6,442 cwt., or 2,346*l*.; unenumerated chemicals by 25,894*l*.; and tanning substances by 4,530*l*. The quicksilver imports are smaller, being 101,779 lb. (1,357 bottles), against 120,825 lb. (1,611 bottles), but on the eight months' total there is a slight increase.

The gain of 7.7 millions sterling in exports last month is divided between foodstuffs and tobacco 870,387*l*., raw materials 1,446,756*l*., and manufactured goods 5,308,769*l*. There are thirty-two sections of exports enumerated, everyone of which bears a plus sign—a fact which we

think unique, and may be regarded as the best feature of the Returns. Iron and steel and other metal manufactures, with machinery, electrical goods, etc., account for 1,767,000*l*. of this increase; while there are also substantial gains of 628,719*l*. in cotton and 652,185*l*. in woollen textiles. Chemicals and allied goods are 102,013*l*. more, the following being the August figures for three years:

1910	1911	1912
£1,420,854	£1,501,233	£1,603,246

In this section we shipped drugs and medicines valued at 196,346*l*., or 65,631*l*. more; quinine exports were 139,783 oz., or 2,471*l*. down, these following a heavy decline in July also. Taking the chemical section as a whole the figures denote great activity, probably the least satisfactory items being sulphate of ammonia and superphosphates both of which have shrunk throughout the year. Soda compounds was very active last month, exports rising from 462,000 cwt. to 600,096 cwt. It is well to note that good business is characteristic of the world's industries at the present time.

Toxicity of Methyl Alcohol.

Adverting to the recent observations by Mr. Thomas Tyrer concerning the toxicity of methyl alcohol, it is interesting to note certain experiments since carried out by Professor Lindner, of Berlin, on the relative action of methyl and ethyl alcohols towards certain micro-organisms. It is well known that cases of death have been attributed in different parts of the world to the use of liquids containing methyl alcohol, but some authorities are of opinion that the toxic effect was due to the acetone and other impurities associated with methyl alcohol in commercial wood-spirit. Professor Lindner's experiments were made with methyl alcohol of so high a degree of purity that the physiological effect which he notes can only be attributed to the alcohol itself. As we all know, ordinary alcohol is a carbonaceous food of a high degree of efficiency, and there are indeed certain micro-organisms which may be grown in media containing no other organic substances than alcohol; notable instances of this are certain mould fungi and mycelial yeasts. Professor Lindner's experiments were made with two organisms—namely, *Oidium lactis* and *Saccharomyces membræfaciens*—which grew readily in media containing a solution of magnesium sulphate, potassium phosphate, ammonium sulphate, and ethyl alcohol. When, however, methyl alcohol was substituted for its homologue, no growth occurred; indeed, it was proved that an active culture was killed by the addition of methyl alcohol.

"The Times," No. 40,000.

On September 10 the publishers of "The Times" marked the issue of their forty-thousandth number by a special number devoted to the history of printing, the British newspaper Press, and "The Times" itself. In tracing the development of the undertaking from the four-page "Daily Universal Register" of January 1, 1785, to the modern newspaper averaging about twenty pages of text containing as much reading matter as two ordinary novels, the leading editorial article on September 10 states that it is "because the reading capacity of man has limitations" that it has to be confined within such bounds. It is pointed out that the great difficulty of a modern editor is to keep within seemingly ample space the vast supply of material with which modern organisation supplies him. The ordinary reader seldom reflects upon the immense amount of organisation, upon the care in the selection of news, and even upon the mechanical skill in the adjustment of the reading matter.

The fact that the paper appears generally correct in its news, readable and sound in its literary matter, accurate in its printing, and is distributed all over the country and the world at the right moment is none the less a marvel, because it has happened so often that people have ceased to look upon it with surprise.

Next, Please!

[The touching domestic scene depicted in the engraving formed part of an advertisement of the toilet specialities of Boots, Ltd., which appeared in a London daily paper last week.]



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Making locks into elegant waves,
We have basked in the sheen of the gold-shampooed girl,

But this—is a shampoo that *shaves!*

And the sweet little chap with the beautiful hair,
Sitting there, all so bonnie and brave,
On the maternal lap, is, of course, quite aware
That with the same shampoo *he'll shave!*

POISONING FATALITIES.

ELEVEN deaths have been recorded from the effects of taking poisons. Two of these were by misadventure.

Ammonia was the suicidal agent used at Starbeck by Lily Cooper (40), who had recently been an inmate of a lunatic asylum.—At Widnes the death of John Loftus, chemical labourer, was due to drinking a quantity of ammoniacal fluid while under the influence of alcohol.

Arsenic.—Mary Jane Kerr (43) died at Birkenhead from the effects of a dose of mixture, used for killing beetles and other vermin, containing arsenic.

Chlorodyne taken to overcome sleeplessness caused the death of an Ardwick carrier named Richard J. B. Young (65).

Disinfectant.—William Griffiths, butcher, Narberth, died after drinking some disinfectant solution. There was no evidence to show with what intention the fluid was taken.

Opium.—George Hay Williams (66), a Seafood tradesman, was found by a coroner's jury to have died from opium-poisoning. There was no evidence to show how the drug had got into deceased's system.

Poisonous Liniment.—James Milton (74), mechanic, Bradford, died through taking an irritant poison in mistake for medicine. It appeared that deceased, whose eyesight had lately become defective, drank some liniment which was contained in an ordinary medicine-bottle kept in a dark corner of a cupboard. It was stated at the inquest that the bottle, which had dose-marks at the back, bore a red label with the words "For outward use only" and the name and address of a local chemist.

Prussic Acid.—At the inquest held at Swansea on Dr. Alfred Harris, tuberculosis physician at Swansea under the Welsh National Memorial Scheme, the evidence showed that deceased committed suicide by taking prussic acid, probably after becoming depressed from the effects of morphia-injections.

Spirit of Salt.—Ernest Comber (25), tramway-conductor, Wood Green, took some spirit of salt with fatal effect after a quarrel with his sweetheart.—At an inquiry held at Wigan concerning the death of a man who had committed suicide by swallowing spirit of salt, the Coroner (Mr. H. Milligan) said if there were no restrictions to prevent persons poisoning themselves with one sort of poison there ought to be no precautions in relation to other poisons; regulations should apply to all or to none.

Kind not Stated.—A Newcastle solicitor named Joseph Richardson (44) committed suicide in his office by taking poison.

Belladonna.

The Effects of Cultivation and Fertilisers on the Growth of the Plant and its Alkaloidal Content.

By Francis Ransom, F.C.S., and H. John Henderson.*

THE following paper is the result of work undertaken in response to a resolution passed at the last meeting of the Congress, viz.:

"That it is desirable that an international inquiry should be instituted with a view to securing greater uniformity in the commercial supplies of potent drugs and the means for determining the same."

Belladonna being a drug known to vary greatly in activity, it was thought desirable to initiate an investigation to determine the extent to which varying conditions of cultivation affect the alkaloidal content of the plant. A paper on a similar subject was published by J. Chevalier ("Comptes Rend.," 1910, 150, 344) two years ago. It is here stated that the use of nitrates with farmyard-manure has the effect of doubling the amount of alkaloids in the dried leaves of belladonna, hyoscyamus, and stramonium. Potassic manures and phosphates are stated to have no influence on the amount of alkaloids.

A problem which has for its solution a method for increasing or regulating the amount of the remedial or toxic principle of whatever kind in medicinal plants is affected by diverse and varying factors, controllable and uncontrollable, and is a question of such intricacy and magnitude as to require the expenditure of much time and money to make experiments in but a small corner of this field of research. The variations of the soil are sufficient to mislead the unwary into making rash forecasts as to the effect which this or that element, or group of elements, will produce when applied to the growing plant. The mangold plots at Rothamsted were a case in point. A soil, which contains potash in a form not readily assimilable by the plant, is dressed with sodium nitrate with most satisfactory results, and the conclusion is drawn that the nitrate is directly responsible for them; certainly it is responsible for them, but in an indirect manner not readily appreciated, for the sodium nitrate has made the potash which was unavailable, available, that which was unworthy, worthy, and, owing to double reaction, complex most probably in the intermediate stages, the potash enters into the plant with striking effect. This effect is attributed to the nitrate, and it is only when nitrate fails to produce the same effect on another field situate perhaps on the same farm, that a suspicion dawns upon the mind as to the accuracy of the conclusion.

When effects such as these are produced upon different fields on the same farm, nay, in the same field itself, it is evident how wrong conclusions may be drawn from experiments carried out in different countries. Even on the same farm the aspect of the ground must be considered. Is it bleak and bare, lying exposed to the cutting north-east wind? Does it lie under the warm lee of a sheltering slope, fanned by the southern breeze? Is the texture of the soil firm or friable, heavy clay or light loam? Is the soil warm and moist, or cold and wet? These are the factors that will play as large, and what is more likely, an even larger part in the physiology of the plant and its metabolism, than the manures with which it is artificially fed.

The situation, texture, drainage, and all that go to make land in good heart are the controllable factors; but to harness the wind, screen the sun, and drench drooping and dispirited vegetation when parched by drought, appertain to the regions of necromancy and not to sober science: these being the uncontrollable factors. The results here presented must, therefore, be viewed as the tentative results which further experience may modify. They are but the first links in a chain which must of necessity be forged slowly. The plots are new and our knowledge of them is very imperfect; they are probably unequal, and

* A communication read before the Pharmaceutical Chemistry Section of the International Congress of Applied Chemistry at New York on September 6.

time alone will reduce them to a level plane for perfect comparison. A mechanical analysis of the soil by the method described by Dr. Hall in his book "The Soil" (page 50) gave the following results, five samples being taken and mixed to form two. The material which failed to pass through a 3-mm. sieve was of two kinds—viz., large stones, pieces of chalk, etc., and a finer material consisting of aggregated lumps of very hard earth, little stones, and hard nodules of chalk (together with vegetable debris) in both cases.

The weight of large stones in Sample 1, before washing, was 3 lb. 3 oz., after washing 2½ lb.; fine stones before washing 8 oz., after washing 7¼ oz. The weight of air-dry fine earth was 21 lb. 11 oz.

The weight of large stones in Sample 2 was 2 lb. 9 oz. and small stones 11¾ oz., after washing 2 lb. 60 gr. and 4 oz. 180 gr. respectively; and the weight of the air-dry fine earth was 13 lb. exactly. The air-dry fine earth effervesced strongly with N/5HCl in both cases.

Summary of Results of Analysis of Air-dry Fine Earth.

	Sample 1	Sample 2
Fine gravel ...	4.46	3.13
Coarse sand ...	36.48	30
Fine sand ...	14.00	14.3
Silt ...	8.37	7.25
Fine silt ...	8.12	8.2
Clay ...	3.94	4.2
Soluble matter ...	19.77	24.0
Humus ...	3.44	4.1
	98.58	95.18

The plots are eleven in number, and are situated in the old herb-garden which adjoins the distillery of W. Ransom & Son, Hitchin, near London. The seed employed was all obtained from the same source—from plants grown on the farm of this firm. It was sown on April 9, 1910.

The table gives at a glance the method of manuring and the results obtained:

Plot	Kind of Manure Cwts. per Acre	1910 (Sept.) Yield of Green Plant per Acre	1911 (June) Yield of Green Plant per Acre	1911 (Sept.) Yield of Green Plant per Acre	1910 (Sept.) Total Alkaloid in Dry Leaf	1911 (June) Total Alkaloid in Dry Leaf	1911 (Sept.) Total Alkaloid in Dry Leaf	Rainfall Inches
		Tons	Tons	Tons	Per cent.	Per cent.	Per cent.	1910.
A	No manure (shade)...	4	6½	2½	0.16	0.255	0.33	April, 2.25
B	Kainit ... 3	8½	16½	6½	0.21	0.285	0.472	May, 2.28
C	Superphosphate 5	8½	12½	7½	0.22	0.265	0.60	June, 1.66
D {	Superphosphate 5	12½	17	10½	0.18	0.33	0.64	July, 1.72
D {	Kainit ... 3							Aug., 1.81
E {	Sod. nitrate ... 1	15½	26	13½	0.22	0.415	0.737	Sept., 0.99
E {	Kainit ... 3							—
F {	Sod. nitrate ... 1	14	29½	12½	0.32	0.605	0.72	1911.
F {	Superphosphate 5							April, 1.25
G {	Kainit ... 3	10½	17½	12½	0.47	0.46	0.61	May, 2.49
G {	Sod. nitrate ... 1							June, 2.09
H	Superphosphate 5	8½	18½	6½	0.36	0.46	0.767	July, 0.57
I	Sod. nitrate ... 1	7½	18½	8½	0.44	0.65	1.035	Aug., 1.51
J	No manure (sun) ...	8½	16½	9½	0.32	0.792	1.02	Sept., 0.94
K	Potato mixture 10	8½	16½	9½	0.32	0.792	1.02	
	Basic slag ... 7	17½	31½	12½	0.28	0.47	0.747	

The formula for potato mixture is—

Superphosphate (26% phosphates ..	...	14 parts
Sulphate of ammonia (20% nitrogen) ..	...	6½ "
Bone flour { (1½% ammonia, 60% total phosphates) ..	}	¾ "
(50% phosphates citric sol.) ..		
(38% lime) ..		
Potassium sulphate (48% potash) ...	...	2 "

The kainit used contained 10 per cent. potash, the nitrate of soda 15 per cent. nitrogen, the basic slag 24 per cent. of phosphate 80 per cent. sol. in citric-acid solution.

Four pounds of leaves was gathered from each plot at the end of September 1910, in the middle of June 1911, and at the end of September 1911, and carefully dried.

The percentage of moisture was estimated for each 4 lb. The percentage of moisture contained in each 44 lb. taken together was as follows:

1910	1911, June	1911, September
86%	87%	85%

The maximum percentage of moisture was in each case found in Plot A; no manure (shade).

1910	1911, June	1911, September
90.6%	88.7%	88%

The minimum percentage of moisture was found in Plot H, except in June 1911, when Plot J contained 1 per cent. less moisture than Plot H as follows:

1910	1911, June	1911, September
H 83.6%	H 85%	H 83.4%
	J 84%	

The percentages of moisture are considered to be of some slight importance, as they enable those sufficiently interested to calculate approximately the percentage of total alkaloid in the fresh leaf, and also because of the effect of shade in reducing the yield of dry material. No great stress is laid on this, however, as the moisture varies within narrow limits according to the weather prevailing when the leaves are gathered.

It is to be much regretted that for some reason not definitely ascertained a large proportion of plants on the plots has died this year, and this will render them of little value for examination; but it is hoped that new seed will be sown next year, so that the work may be continued, and may possibly be extended on a larger scale, on the farm.

The following was the method employed for alkaloidal estimation. It was found to give concordant results, and when the final solution was allowed to evaporate spontaneously a light crystalline residue was obtained in every case:

Twenty grams of the leaf in 100 powder was exhausted in Dunstan and Short's continuous-extraction apparatus with industrial methylated spirit 66 o.p., eight columns being allowed to pass. The first two columns were percolated cold and reserved to avoid subjecting the bulk of the alkaloid to prolonged heating. After exhaustion the percolates were bulked, the alcohol recovered, and the soft

extract obtained was estimated by the method directed in the "British Pharmaceutical Formulary," 1901, of the British Pharmaceutical Conference, for the estimation of total alkaloids in ext. belladonnæ folii alcoholicum, using the whole of the extract obtained. The result multiplied by five gave the percentage of total alkaloid obtained from the leaf.

In the table it is not without significance that the highest alkaloidal result was obtained from the plot which had not been supplied with any manure, but which was fully exposed to the sun (Plot I, September 1911). We believe that this is about the highest percentage of alkaloid ever recorded as having been obtained from dried belladonna-leaf. The increased yield of alkaloid in the leaves gathered from the second growth in the autumn of 1911 is of special interest.

Although we have not obtained sufficient evidence that the percentage of alkaloid in the dried leaf is materially

altered by artificial manures, it would appear that in several cases the yield of green plant per acre has been largely increased. It would also appear that in the case of belladonna it is useless to hope that the drug shall possess anything approaching uniformity in medicinal potency, even when carefully collected and dried.

It should be mentioned that most of the work in the earlier stages of this investigation was carried out by Mr. P. E. F. Perrèdes, B.Sc., F.L.S., to whom we wish to express our acknowledgment.

Essential Oils.

Unification of Processes for Commercial Analysis and Valuation.

By John C. Umney, F.C.S., and E. J. Parry, B.Sc.

(A Communication read before the Pharmaceutical Chemistry Section of the International Congress of Applied Chemistry on September 9.)

AS announced in the "Perfumery and Essential Oil Record" for March 1912, we have had the greatest pleasure in conferring with M. Jeancard regarding the standardisation or unification of analytical methods as applied to essential oils and perfumery products. In the communication to this Section by Messrs. Jeancard and Satie, observations based upon a very wide manufacturing experience are cited. It is our intention to confine ourselves to the subject simply from an analytical standpoint, leaving our honoured friends to deal not only with the analytical side of the question, but also with the manufacturing side, with which in many instances they have special experience.

We should like to state, by way of introduction, that our attention was first directed to the difficulties of the subject by the discrepancies in the results obtained by different analysts in the examination of essential oils; in fact, we think we are justified in revealing that it was in consequence of discrepancies between our own results that we were first led to compare notes regarding the processes and details of processes which are of such great importance.

The discrepancies naturally are not wide, but they may be of commercial importance, and not infrequently the discrepancies may be misunderstood and misinterpreted. We therefore have set ourselves to the task of considering how far it is possible to put forward processes for the analytical examination of essential oils which shall fulfil the object of (1) determining purity, (2) valuation, without having certain important drawbacks. The drawbacks to which we would refer are those which we have already referred to in the "Perfumery and Essential Oil Record" of December 1911, p. 272, namely: (1) That the analyst should not be made into a machine; (2) that the necessary variations in composition, due to climatic and other conditions, should not be overlooked; (3) that the tests put forward should not be of such limited character as to act as a guide to those whose intelligence is so misapplied in the preparation of sophisticants.

For the determination of the physical constants of most of the essential oils we take it that there is practical agreement. This applies to the determination of specific gravity, refractive index, polarimetric results, and to acidity, and we certainly see no necessity to depart from the conditions, which have been arrived at after mature deliberation, and which are printed in "The Analyst" of November 1911, p. 538, and are reproduced in the "Perfumery and Essential Oil Record," December 1911, p. 272. The following particulars may be briefly cited:

Density is the ratio of the mass of a given volume of a body to the mass of the same volume of distilled water at 4° and under normal pressure. Since the majority of existing tables contain the values at 15°, compared with water at 15°, densities are in practice referred to those conditions (alcoholic solutions, and especially solutions of various acids, oils, and essences). An exception is made in the case of solid fats, but the temperature *T* at which their density has been taken, and also the temperature *T* of

the water to which the density is referred, are to be stated as follows:

100°/15°, 40°/40°, etc.

Densities are not to be given in arbitrary units (Baume, Tessa, Cartier, etc.). The alcohol-content of alcoholic liquids must be given in grams of alcohol, either per litre or per 100 c.c., and at the same time in volumes of alcohol, according to the method in vogue in the particular country, but preferably in volumes of absolute alcohol contained in 100 volumes of the liquid analysed.

Refractive Index.—Refractometric measurements are to be expressed as refractive indices with reference to air, for the spectrum line *D*, and at a temperature of 25°, but at a temperature of 40° for fats. When, however, it is impossible to work at the temperatures of 25° or 40° as mentioned above, the refractive index may be taken at another temperature *T*, but this must be designated by the expression "refractive index (*T*)."

Polarimetric Results.—Polarimetric readings are to be expressed in terms of degrees of arc, with centesimal fractions, for a tube of 100 mm., at a temperature of 20°, and for yellow light (*D*).

We would, however, like to make the following qualification in speaking of the standardisation of methods in reference to physical constants in essential oils. The question of determination of these constants at given temperatures is merely a matter of convenience, and we should only suggest that they should be accepted as a general guide, so that the reports of various analysts might always be understood when read by other analysts. For example, it would be futile to attempt to bind any analyst in any given country to adhere strictly to a given temperature for these constants, especially when the U.S. Pharmacopœia, for example, adopts 25° C. as the temperature for sp. gr. determination, while the British Pharmacopœia adopts 15° C. We would therefore suggest that it be definitely understood that these physical constants are always taken to refer to the temperatures quoted below unless any other temperature is specifically stated in the analyst's report.

It is, however, after dealing with the determination of the physical constants that many points occur which may lead to misunderstanding between those dealing with essential-oil analysis. It is, therefore, in connection with the examination of essential oils which have considerable commercial importance that we put forward the following general suggestions, not with any idea of finality, but with the view of eliciting criticism of our contribution to this subject, just as our French friends have done on their side.

We would certainly deprecate the standardisation of analytical methods for the determination of given substances which are really determinable by various well-known methods. In the case of such substances as essential oils, however, the majority of the determinations, in fact, relate not to one body, but to groups of bodies, which cannot be accurately determined, but which for purposes of convenience are referred to in terms of a given constituent. For example, the esters in bergamot oil are not entirely composed of linalyl acetate, but for convenience, owing to the impossibility of their separation, they are always returned as linalyl acetate. The same is true also with oleic acid in olive oil, and so on; and since the determination of these groups of bodies is not an exact one, but varies with variability in conditions, we think that standardisation of these processes becomes absolutely necessary. We propose then to refer briefly to the methods which we have used, in common, we believe, with the majority of British analysts, for the examination and valuation of the following essential oils:

1. Oils containing Aldehydes, other than Lemon Oil.

For the determination of aldehydes in such oils as cassia, cinnamon, and lemongrass, custom has now so firmly established the use of acid sulphite of soda in preference to the neutral that we think it would be most unwise, if not almost impossible, to attempt to replace the acid by the neutral sulphite. It is true that in the case of lemongrass oil the acid sulphite gives a result of about 4 per cent. higher than when the neutral sulphite is used; but it is probable that this 4 per cent. consists of bodies of an aldehydic nature which in condensation-reactions with

violet perfumes are manufactured from the oil, so that the measure of the value of the oil to the ionone manufacturer is probably more correct when determined by the acid than by the neutral body. In practice we think that 10 c.c. of the oil should be used with about 150 c.c. of 30-per-cent. solution of the bisulphite. The reaction proceeds better if the oil is first introduced into the flask, which has stood in the water-bath for a minute in order to heat it, and about 75 c.c. of the acid-sulphite solution added while hot. In the case of lemongrass oil the time of absorption should be one hour; but in the case of cassia oil the absorption must go on until every particle of solid matter is broken down. The flask should be well shaken at intervals of five minutes.

2. Lemon Oil.

We think that most analysts who have had considerable experience in the determination of citral will agree that the method of Walther as modified by Bennett gives the most accurate results possible. The exact details of this method are as follows:

Twenty grams of the oil is accurately weighed into a 200-c.c. flask, 20 c.c. of semi-normal solution of hydroxylamine hydrochloride in 80-per-cent. alcohol is added, then 8 c.c. of normal alcoholic potash and 20 c.c. of alcohol. The mixture is boiled for thirty minutes under a reflux condenser, cooled, and diluted with 250 c.c. of water. The hydrochloric acid which remains, combined with the hydroxylamine, is neutralised with alcoholic potash, phenolphthalein being used as an indicator. The hydroxylamine which has not combined with the citral is then titrated with semi-normal sulphuric acid, using methyl orange as indicator.

A blank test is carried out without the oil of lemon, and the difference between the amount of sulphuric acid required in the two tests represents the amount of hydroxylamine combined with the citral. This figure multiplied by 0.076 gives the amount of citral in the quantity of oil taken.

The only precautions we would draw attention to as being necessary are that the reaction-flask should be ground on to the reflux condenser to prevent the slightest loss of hydroxylamine, and the flask should be allowed to get quite cold before the condenser is washed down.

3. Oils containing Phenols.

The determination of phenols by means of absorption by a solution of caustic potash is probably the most convenient, and is certainly fairly accurate for all practical purposes. The determination of eugenol is frequently carried out by the benzyl-chloride method, but unless so specified we consider that a report stating the eugenol-content in oil of cloves or other oils should be understood to refer to the absorption process. The only point in connection with this arises from the fact that a small proportion of the known phenolic bodies is absorbed, and probably this depends to some extent upon the concentration of the alkali. Most satisfactory results are obtained by the use of a 5-per-cent. solution of ordinary stick caustic potash. Ten c.c. of the oil should be used in a flask of about 150 c.c. capacity. The sp. gr. of the absorbed and unabsorbed portions are not usually taken into account, and we do not think that it would be wise to introduce this correction, since it might vary considerably in different samples of the same type of oil.

4. Oils containing Esters.

We think that in the case of oils containing esters one hour should be the accepted time for saponification, unless otherwise stated. The saponification should be carried out with semi-normal alcoholic potash, and no result should be accepted as correct unless after titration it was found that an excess of alkali remained which was at least equal to half that employed. It is useful, of course, to perform two or more saponifications for different periods of time, as indicating the presence of certain artificial esters which are not readily saponified. This is the case especially with terpinyl acetate, and saponification for thirty minutes and for ninety minutes will give strong indications as to the presence or absence of this ester.

The only point arising in regard to the expansion of results depends on whether or no the free acids are first

determined and the amount of potash necessary to neutralise indicated from the saponification results. In our opinion it is necessary to determine the free acid and subtract the quantity of potash used. This is especially the case in some bergamot oils, where failure to make this correction has led to the oil being returned as containing sometimes fully 1 per cent. more ester than it really does.

5. Oils containing Free Alcohols.

So much has been written of late on the determination of the acetylisable constituents in citronella oil that it will be necessary only to very briefly summarise the acetylation process. We have recently examined a large number of samples and find that the most concordant results as between different analysts are yielded by the following process:

Ten c.c. of the oil is gently boiled in a reflux condenser with 20 c.c. of acetic anhydride and 2 grams of anhydrous sodium acetate for two hours. The oil is then washed with brine, such washing being made with brine containing 1 per cent. caustic potash. A drop of phenolphthalein is added to the brine, and if this, after shaking with oil, separates in a colourless condition the washing with alcoholic brine is repeated. When neutral the oil is separated, dried by contact with anhydrous potassium sulphate, and from 2 to 3 grams saponified with semi-normal alkali for one hour in the usual manner.

6. Oils containing Cineol.

We do not think that any process which could be suggested for the determination of cineol is sufficiently accurate to allow of its being used as a standard process, and would suggest that there is a good field for work in this direction.

The above suggestions are, of course, tentative, and if standards for processes of this type should be adopted with official recognition, modifications in various directions would no doubt be suggested and might form the basis of useful discussion at a later date between essential-oil analysts.

National Health Insurance.

CANCELLING INSURANCE STAMPS.

The subjoined statement was issued from the offices of the Commission, Buckingham Gate, on September 6:

The National Health Insurance Commission (England) desire to invite the attention of employers to the necessity of cancelling every health-insurance stamp at the time of affixing it to the contribution card, by dating it either with pen and ink, or by a metallic die with indelible ink. In the exceptional conditions prevailing at the commencement of the Act, employers were allowed to use rubber dating-stamps until metal stamps could be obtained; but the Commissioners give notice that this concession will be withdrawn on September 30 next, after which date rubber stamps must not be used.

THE DISPENSING.

A meeting of the Pharmaceutical Standing Committee on Insurance was held at 17 Bloomsbury Square, London, on Wednesday, September 11. Mr. P. F. Rowsell, J.P. (Exeter), presided, and Messrs. C. B. Allen, A. Hagon, E. T. Neathercoat, J. H. Cuff, F. J. Gibson, Edmund White, J. F. Harrington, D. Arnott, E. S. Waring, A. L. Milne, W. B. Trick, J. C. Pentney, J. Rutherford Hill, J. P. Gilmour, C. T. Cockburn, T. Guthrie, G. A. Harmer, G. V. C. Last, Harry Kemp, and the Secretary (Mr. W. J. Uglov Woolcock) were also present. Apologies for non-attendance were received from Messrs. J. F. Tocher, James B. Francis, E. Carpenter, H. G. Greenish, R. Feaver Clarke, and T. W. Townley. After formal preliminaries, the meeting considered the recommendations of the Executive Committee on the questions of (a) the scale of prices to be submitted to the Commissioners for dispensing and the supply of medicines, etc., and (b) the appointment of an additional member of the Standing Committee. The recommendations of the Committee in both cases were adopted, the scale of prices by a majority of 16 to 4, and the appointment of Mr. Robert W. Lindsey, Chairman of the Public Pharmacists' and Dispensers' Association, as a member of the Standing Committee was unanimously agreed to. The meeting

considered various questions which are likely to arise in connection with the draft regulations concerning medical benefit, and instructions were given to the pharmaceutical delegates (Messrs. Gilmour and Woolcock) as to the way in which the various matters should be dealt with. The question of the supply of drugs for sanatorium patients was discussed, and the position of dispensers in the various tuberculosis dispensaries was considered. It was resolved that, wherever possible, efforts should be made to see that the dispenser is a properly qualified pharmacist. The steps to be taken in this direction were decided on by the Committee and met with general approval. The line of action to be followed in the event of the medical regulations proving inimical to the interests of pharmacists was agreed to.

MEDICAL AND PHARMACEUTICAL.

The List of Societies approved under the National Insurance Act during August extends to twenty pages (12 in. by 8½ in.). This forms the first supplement to List No. 14 of July 31.

Mr. R. Lord Gifford, Ph.C., was appointed by the Blackburn Insurance Committee on September 5 to serve on the Sanatorium Committee. Mr. Gifford has also been elected to serve on the sub-committee appointed to select a secretary to the local Insurance Commission.

Three members of the Newcastle Insurance Committee have refused to obey the call of the British Medical Association to members of the local Insurance Committees to resign their positions. They assert that the duties of citizenship are more sacred and binding than that of belonging to the British Medical Association.

Councillor Thomas, of Messrs. J. J. Thomas & Son, chemists, Yorkshire Street, Rochdale, has been appointed Chairman of the Sanatorium Sub-Committee of the Rochdale Insurance Committee. "The appointment," says the "Rochdale Observer," "is a guarantee that the sanatorium benefit will be administered with tact and sympathy."

In connection with the Insurance Act the Worcestershire Insurance Committee have completed arrangements for tuberculosis dispensaries at Evesham, Pershore, Redditch, Stourbridge, Oldbury and Smethwick Hospital, Worcester, Bromsgrove, Droitwich, Halesowen, Kidderminster, Malvern, and Upton-on-Severn. These await only the approval of the Local Government Board.

A health-insurance calculator for piece and time workers over twenty-one years of age has been devised by Messrs. Gall & Inglis, 31 Henrietta Street, Strand, London, W.C. This patented device has two sliding scales, which enables and greatly facilitates the calculation of the rate of remuneration and simplifies apportionment of the employer's insurance rate, especially when the wage earned verges upon the differential rates of insurance. It costs 2s.

A report has been prepared by the Leeds Medical Officer of Health (Dr. J. Spottiswoode Cameron) on the establishment of several tuberculosis dispensaries in various parts of the city. Dr. Cameron mentions medicines and drugs as a likely department in which working costs could be cut down if necessary. It would not be necessary, he advocates, to spend much money in the provision of drugs. "The treatment of tuberculosis by drugs forms, as it seems to me nowadays, a very slight portion of our curative treatment. . . . It is undesirable to encourage the fondness for medicine."

The Staffordshire Insurance Committee on September 10 declined to agree to the fees asked by the doctors for reporting on and attending consumptive insured persons, expressing the opinion that the charges were too high for the class of persons who would benefit under the Act. It was stated that the doctors required 7s. 6d. against 5s. offered for each report, and 3s. 6d. for visiting. The committee decided to pay the amount demanded by the doctors in seven urgent cases in order to avoid delay, and urged the County Council to expedite the erection of sanatoria. It was stated that there are 1,600 cases requiring treatment.

The Shops Act, 1912.

The following are brief particulars of recent local arrangements:

Aberdeen.—The Town Council's Bills and Law Sub-committee received deputations on September 6 for and against the proposed order for exemption from half-holiday closing by the chemists of the city. Mr. W. C. Forbes, solicitor, appeared for the petitioning chemists, and Mr. Frederick Kay for the objectors. Dr. Fraser also was heard on behalf of the Aberdeen Branch of the British Medical Association in opposition to the closing of chemists' shops. The sub-committee decided to consider the representations made to them.

Airdrie Magistrates agreed, on the request of a majority of the chemists and druggists of the burgh, to include them in the proposed closing order fixing a weekly half-holiday. The Town Clerk has been instructed to give the statutory notices as to the proposed order.

Arbroath.—The Town Council gives notice that it proposes to make a closing order fixing the weekly half-holiday for chemists for Wednesday, with the option of Saturday. It is also proposed to fix the closing hours on Monday, Tuesday, Thursday, and Friday at 8.15, and on Saturday at 10 p.m.

Birkenhead.—The Town Council issued on September 6 an order for chemists and drug-store proprietors to close on Thursdays at 1 p.m.

Bradford.—The Corporation on September 10 made an order, described as "The Exempted Shops (Weekly Half-Holiday) Bradford Order, 1912," by which the provisions of Section 4 of the Act are extended to chemists, the requisite two-thirds majority of whom voted themselves into the operation of the section. The early-closing day is to be Wednesday at 1 p.m.

Dudley.—The Town Council has decided to make an order fixing Wednesday as the weekly half-holiday for vendors of medicines, etc.

Huntingdon.—The Town Council have taken a vote of the chemists on the half-day closing question. The three pharmacists in the town all voted in favour of Wednesday.

Leeds.—The recently appointed Chief Inspector under the Shops Act states that there is serious ground of complaint against local shopkeepers on the score of failure to exhibit the necessary notices under the Act, and warns tradesmen that active steps are about to be taken to ensure compliance with the regulations.—A deputation from the Leeds Chemists' Association waited upon a sub-committee of the Leeds Corporation on September 10 to press for a closing order for chemists, and to oppose a proposal for exemption of the central parts of the city. The deputation consisted of Messrs. F. Pilkington Sargeant, W. Johnson, R. Milestone, and R. G. Shaw (Hon. Secretary), who put their case concisely, and stated in answer to questions that no difficulty was anticipated as to supplying necessitous calls for medicines, etc. The committee eventually decided to defer consideration of the matter until the next meeting of the Markets Committee.

Liverpool.—The City Council on September 4 made an order for the extension of the Wednesday half-holiday to certain classes of traders, including chemists (with the exception of the central exempted area). Councillor R. C. Herman moved that a fresh poll be taken, as he considered that chemists had voted under a misapprehension. Alderman Purcell replied that chemists were exempt by Act of Parliament from closing, but that the chemists themselves had asked the Council to make the order. Of the 228 registered chemists, 220 voted, 159 being for closing and sixty-one against, thus giving two-thirds majority. Besides, the Act made it quite clear that a chemist must not be prevented from making up a prescription at any time. The Lord Mayor pointed out that the majority could appeal to the Home Office, who had the power to make the order over the heads of the Council.

Manchester.—There are distinct signs of dissatisfaction in connection with the Wednesday weekly half-holiday. Complaints are being made regarding various shops being kept open for two or three hours at night. Several chemists seem determined not to close until they are compelled to do so. Many of the Shops Act Committee formed in connection with the Manchester Pharmaceutical Association are striving to get the closing order put into force, but the local authorities do not appear inclined to move in the matter as yet.

Ossett.—The local chemists have petitioned the Town Council to make a closing order for one o'clock on Tuesdays.

Chemists' Dental Society.

THE Executive and Council of this Society had a busy day on Thursday of last week (September 5), when they had meetings in the Holborn Restaurant, London, and afterwards members of the Society and friends met the Council and Executive over a cup of tea. The Society is going ahead, and has had a certificate designed, which measures 12 in. by 9 in. We give a reproduction of it:



This is to Certify that

_____ has satisfied the
Council of the Chemists' Dental Society that he
is a fit person to be enrolled

(A MEMBER)

and that he has been duly elected in accordance
with the rules of the Society.

This Certificate is granted subject to all
the conditions imposed by the Council from
time to time.



John H. Tasker President
Edw. Benson Vice-President
Benson Harries Secretary

Date _____

Mr. J. H. Tasker presided at last week's meetings. The report presented by the Hon. Secretary (Mr. Benson Harries, Newport, Mon.) called attention to the present state of dental affairs, making reference particularly to the resolution recently accepted by the British Dental Association proposing that unregistered persons should be required to submit to an examination within a limited time and afterwards recognised under the Dentists Act. The report further showed that the Executive had been actively engaged in other matters affecting the welfare of members.

The following gentlemen were appointed

HON. LOCAL SECRETARIES

of the Society for their particular districts. They will also act as instructors:

Messrs. T. C. Maccormack, York; Wells, Barrow-in-Furness; Grimshaw, Blackburn; Weston, Runcorn; Burnett, Liverpool, Fuge, High Wycombe; and Smith, Salford, Manchester.

The President (Mr. Tasker) has also consented to give instruction.

The following also were elected as Hon. Local Secretaries:

Messrs. Smith, Newcastle-on-Tyne; Garry, Brixton; Johns, Gravesend; Hancock, Weymouth; Gee, Redruth; Barrett, Gillingham; Jenson, Birmingham; Wellwood, Glasgow; Smith, Cootehill, Ireland; Watson, Aberdeen; Hearle, Islington; Coppock, Nottingham; and E. Brownbill, Leeds.

The certificates of membership of the Society were issued and were taken up by all members present. Members may now have their certificates on payment of 2s. 6d. upon the conditions prescribed by the Council.

OTHER BUSINESS.

The President was requested to interview the Chairman of the National Deposit Society with a view to obtaining similar privileges to those granted by them to other dental associations.

The names of new members were submitted and approved, viz.: Messrs. Weston (Runcorn), Wells (Barrow-in-Furness), Tremlett (Portsmouth), Hancock (Weymouth), Garry (Brixton), Wellwood (Glasgow), Weir (Kemnay), Johns (Gravesend), Higgins (Stevenage), Jones (Liverpool), Williams (Plaistow), Nichols (Waltham Cross), Armstrong (Seaham Harbour), Page (Wilton), Routly (Hackney), Jones (Llanelli), and Faichney (Graignamanagh).

Mr. Templar Malins (Cardiff) was elected a member of the Council in place of Mr. Gee, resigned.

Mr. J. O. Stringer (Treasurer) presented a financial statement.

It was agreed that Wednesday and Thursday alternatively be the days for Council and members' meetings, and that they should be held in the evening.

Over the cup of tea the proposed scheme of insurance against accidents and mistakes in practice was considered, and a proposal is to be submitted to the Society as a result of the discussion. The Society's legal adviser is to advise upon legal questions submitted by members through the Hon. Secretary.

The annual meeting and the next meeting of the Council will take place in May during the Chemists' Exhibition week.

Confectioners' Exhibition.

THIS week the Agricultural Hall at Islington is turned into a gigantic bread and sweetstuff emporium, with the usual infinite variety of choice and elegance in display of materials. The occasion is the twentieth annual exhibition of the Confectioners, Bakers, and Allied Traders, and we understand it is already an assured success, every inch of space having been let. The Main Hall is packed with bread, flour, sweets, cakes, drinks, fruits, and a hundred-and-one dainties calculated to make the mouth water. The artistic character of the decorations is always a prominent feature of this exhibition, and to metropolitan chemists who have a spare hour a few useful hints on window-dressing can easily be picked up. The working bakery of Werner, Pfeleiderer & Perkins on the south side of the Hall is the chief "draw," but there are many other machinery exhibits, including one for caramel-wrapping in oiled paper at the rate of 100 a minute, machines for labelling jam-jars, potato-peelers, bread-slicers, flour-sifters, kneaders, and the like. Wm. Gardner & Sons (Gloucester), Ltd., have their usual bay position on the main floor, where they show a large selection of their "Rapid" sifters and mixers. These include machines for self-raising flour, baking-powder, egg-powders, meals, flour, etc.; also their patent sifter, mixer, and essence-sprayer for blending essences or flavourings into flour, sugar, and other powders. Flugel & Co. show their aerating-water machinery in operation, also syphon and bottle filling apparatus. The firm have just introduced a magnetic crown corking-machine by which each cork jumps into its exact position by magnetic attraction, thus obviating the use of the grip springs or teeth which formerly held the tin cork in position; this sells at 23/ complete with syrup-pump. Consol Automatic Aerators, Ltd., show their latest designs in soda-fountains, all containing the "Consol" patent automatic aerator, which has previously been described in this journal. The centre of the Great Hall is occupied by the National Cash Register Co., Ltd., where the latest models of their registers and autographic tills are displayed at prices to suit all buyers. In the Gallery Thomas O'Brien has a selection of his self-closing check-tills and similar appliances. Williams Bros. & Co. have a neat exhibit of their harmless colours for confectionery and foodstuffs. These comprise egg-yellows for custard-powders, cakes, biscuits, etc.; annatto substitute, lemon yellow, jam red, and all colours for boiled goods, fondants, gelatin table-jellies, etc. It need hardly be said that these colours are guaranteed harmless, on the testimony of Dr. S. Rideal, who thoroughly investigated them a year ago. The Confectioners' Materials Co., Ltd., make a speciality of butter substitutes for caramel and toffee making, cocoa-butter substitutes for chocolate

making, and all raw materials used in the confectionery trade. The Lescol Perfumery Co. make a strong feature of high-class perfumery at their pavilion. For perfumes in bulk they have adopted a new style of packing, which is a great improvement on the old—*e.g.*, their "quadruple extract" is now obtainable in $\frac{1}{4}$ lb., $\frac{1}{2}$ lb., and 1 lb. bottles at 9s. 9d., 9s. 6d., and 9s. 3d. per lb. respectively; their "triple extra" and "triple" are also packed in similar style. As regards bottled perfumes the company show a wide range from the cheapest to the most expensive lines, and are constantly improving upon the designs, shape, and artistic merit of their productions. Those who contemplate placing Christmas orders would do well to inquire for their latest novelties. The exhibit also contains a full range of essences, essential oils, floral ottos, colours, etc. Horlick's Malted Milk Co. have a pretty tasting stall, where malted milk is dispensed by lady attendants; and Sandow's Cocoa and Chocolate Co., Ltd., have a fine reception-room painted in white enamel, where samples of their "Health and Strength" cocoa and chocolate may be tasted. Their chocolates are put up in fourteen varieties, two of which are exclusively sold by chemists and druggists. The first contains 10 per cent. of pure hæmoglobin, and the second contains a combination of lecithin and hæmoglobin. The packets are retailed at 1s. each, and are invoiced at 9s. per doz., in addition to which there are discounts, which bring up the total profit to 32 per cent. The company report that business is extremely good. Malt-extracts are always well represented at this exhibition, these including the pavilion of Paine & Co., Ltd., who show "John Bull" and "Paco" brand malt products and the choicest English milled flours. The British Diamalt Co. have an exhibit in the centre row devoted to the highest class diastatic malt-extract, Diamalt malt-extract in liquid and powder form for white bread, and Diamaltose malt-extract for brown, malt, and digestive bread. The British Malt Products Co., Edme. Ltd., and Montgomerie & Co., Ltd., exhibit similar products. In the entrance hall Danysz Virus, Ltd., show their well-known preparations, attention being called thereto by the clockwork models of cats. Among other exhibits are the Natural Food Co., Ltd. (Allinson's wholemeal bread, flour, etc.); H. Thompson & Co. (idolice specialties); Southall & Smith (automatic weighing-machines); W. T. Ellmore & Son (wicker and cane specialists); Gordon & Dilworth Tomato Catsup, Ltd., and Rothschild & Baker (light trucks and barrows). The exhibition closes on Saturday, September 14.

COLLEGE NOTES.

THE syllabus of classes at the Sir John Cass Technical Institute, Jewry Street, Aldgate, London, E.C., for the Session 1912-13 is now ready. In addition to the usual courses in scientific subjects, special technological tuition is available, including brewing, fuel, and special departments of metallurgy.

Athletics and Sport.

THE SWIMMING CLUBS of Bovril, Ltd., and the Apollinaris Co., Ltd., are holding a joint gala at Holborn Baths, London, on September 21.

ALLENBURYS' C.C. defeated The British Drug Houses C.C. at The Elms, Walthamstow, on September 7, thus securing the championship of the Wholesale Druggists' Cricket League, the team having won all their matches in the competition so far. The scores were: Allenburys, 90; B.D.H., 31. Stokes and Williamson took five wickets each for 13 runs and 15 runs respectively.

HINTS ON STOCKING FLY-CATCHERS.—As it sometimes happens that some in the trade have fly-catchers left over at the close of a season, the following hints *re* storing should be useful: (1) Stock in a cool dry place. (2) Occasionally turn the boxes over. This keeps the gum from settling to one side and drying on the surface. (3) At the beginning of a season when there are but few flies about do not sell old stock, but keep such until later, when flies are plentiful and fly-catchers rapidly fill.

TRADE NOTES.

CONSUMPTIVES' DAILY REGISTER.—Dr. H. de Carle Woodcock, of Leeds, has added to his works on tuberculosis a useful daily register for the use of consumptive patients who are undergoing the tuberculin treatment. It is a book the pages of which measure $8\frac{1}{2}$ in. by $5\frac{1}{2}$ in., and two of these facing each other form a record sheet for a week's entries in regard to items which the patient himself can observe and note—*viz.*, temperature, pulse, general symptoms, special symptoms, sputum, rest, and diet. These sheets are prefaced with forms to be filled up by the doctor as a result of his diagnosis, while there are suitable spaces for remarks throughout the book, which lasts for fourteen weeks. The book is published by Messrs. Parke, Davis & Co., Beak Street, London, W., at 6d. per copy, each copy being enclosed in a varnished envelope. It is a very complete and useful book.

SEASONABLE SPECIALITIES.—Messrs. Lorimer Marshall, Colebrooke Works, Islington, London, N., have afforded us an opportunity of examining the quality and packing of several lines which the cold spell of weather has made highly seasonable. Malt-extract of fine flavour and high diastatic power, both plain and with cod-liver oil, are available in a variety of packings in square or round screw-topped jars of elegant appearance. The extract is guaranteed free from glucose, while the oil is incorporated in any special proportion if so desired. Customers have a large selection of labels to choose from. A pale blue carton with gold yellow and black label is a very tasteful combination. All the various packages are covered with semi-transparent parchment, which keeps them quite clean. Emulsion of cod-liver oil ($33\frac{1}{2}$ per cent.) is another special line, the product being perfectly white and agreeably flavoured. This is packed in various sizes from 3-oz. to 24-oz. panelled bottles, and also in 5-oz. and 10-oz. Mexican flats in cartons. There is ample choice of labels here also, while a variety of flavours is also available. The non-freezing Norwegian cod-liver oil used in the above preparations possesses an exceedingly bland taste, and is remarkably free from unpleasant odour. It is also packed in panelled bottles of various sizes. Beef-and-malt wine made with fine full-bodied port, and a special Liebig's extract of meat neatly got up in metal-covered pots, are other products of excellent quality, which the prices make worthy of our readers' attention. The firm's compound syrup of hypophosphites does not deposit or ferment. It is packed in plain blue ovals. Messrs. Lorimer Marshall will be pleased to give full price particulars on postcard application.

ASSOCIATION AFFAIRS.

Trade Organisation.—Mr. W. J. Uglow Wooleock informs us that the first of the district pharmaceutical meetings to be held under the Federation Scheme will be at Cardiff on October 3. To this meeting the whole of the registered pharmacists in the six southern counties of Wales will be invited, and it is hoped that every pharmacist who can possibly do so will attend what is expected will become an annual feature in pharmaceutical organisation. A private conference will take place in the afternoon, when it is anticipated that Mr. E. T. Neathercoat will preside. On the same evening a mass meeting will be held, when Mr. A. Hagon will preside, and Mr. Neathercoat and Mr. Woolcock will be among the speakers.

Manchester Associations.—The Assistants' Association will have a lantern-lecture on the commerce of drugs by Professor Greenish on Wednesday evening, September 25. For where and when apply to the Secretary. The Pharmaceutical Association's dinner will be in the Grand Hotel on Wednesday evening, October 9; tickets, 4s. each.

Institute of Ophthalmic Opticians.—The calendar for 1912-13 has just been issued. It contains lists of officers, committees, and members, the standing orders of council, calendar containing dates of meetings and dates of interesting optical inventions. The principal features of the Institute are outlined, and the seventh annual report also printed.

Southampton Pharmacists' Association.—The next meeting will be held at Winchester on Wednesday, September 18, at 8.30 p.m. Arrangements have been made to view the Cathedral and College in the afternoon. Tea at 5.30. Tickets from the Hon. Secretary (Mr. F. B. Wride, 1 and 2 Strand, East Street, Southampton). A discussion will take place as to the advisability of adopting a minimum price-list for the chemists of the district.

Pembroke County Pharmacists' Association.—Mr. T. Lewis presided at a meeting at Haverfordwest on September 4. Messrs. F. D. Phillips, H. A. Williams, L. J. Meyler, S. Lloyd, D. J. Llewellyn, J. Evans, W. F. Johnson, B. Pugh Davies, S. L. Rowe, J. L. Jenkins (Hon. Secretary), and Mr. W. J. Uglow Woolcock were present. The organisation of pharmacists in the county in connection with the National Insurance Act was discussed, and it was announced that twenty-five out of the twenty-six pharmacists in the county have joined the Association, which is regarded as most satisfactory in view of what has to be done under the Act.

Llanelli and East Carmarthenshire Pharmacists' Association.—Mr. Woolcock addressed a meeting at the Stepney Hotel, Llanelli, on Thursday, September 5. There were present Messrs. Evan Evans (President), J. W. Evans, D. Morris, Evan Jones, John Gower, J. Maurice James, J. O. M. Wade, D. J. Lewis, T. Thomas, D. Charles, T. Jenkins, D. J. M. Jones, J. Rees, and John Davies. Messrs. J. Rees, D. G. Rees, and E. T. Rich came from Swansea, to the satisfaction of their Llanelli *confères*. The precedent of inviting a Llanelli pharmacist to take the chair at a recent meeting in Swansea was followed, Mr. J. Rees (President of the Swansea Association) now occupying the chair. The National Insurance Act was the subject of discussion, Mr. Woolcock reporting what has been done in Wales, which is now covered by Associations in accordance with the Federation Scheme. Several matters connected with the Pharmaceutical Society's work were also discussed.

Hull Chemists' Association.—The first meeting of the session was held in the Grosvenor Hotel on September 10, Mr. T. Smith (President) in the chair. Messrs. Tebb, Staning (Hon. Secretary), Day, Smith, Robinson, Chapman, Newton, Wharton, Richardson, Heath, Jones, Sawyer, and Robson were also present. The President welcomed the members and spoke with gratification on the shops closing order for the district. He hoped they would stick together and work for other reforms which would help the trade.—The Hon. Secretary reported the result of the action regarding a circular which one of the large company drug-stores had issued in Hull, and which the members regarded as going beyond the bounds of legitimate competition. It transpired that the company's board were not aware of the tenour of the circular, and promised to modify it. The Secretary also reported on the closing order already referred to. A discussion followed in regard to closing earlier on Saturday nights, and it was decided to continue this at the next meeting. Nominations were made for the Divisional Secretaries of the Pharmaceutical Society as follows: Central Hull, Mr. Stoakes; West Hull, Mr. Richardson; and East Hull, Mr. Hoyles. An arrangement between three of the local company drug-stores by which they were all going to sell certain tinctures at uniform prices was reported, whereupon remarks were made on cutting, and who is responsible for it, but no decisive course of action was decided upon. A vote of sympathy with Mr. Smith was passed, he having recently had a serious operation, and is not yet better.

Preston Pharmacists' Association.—The first meeting of the session was held at the Crown Hotel, Preston, on September 3. Messrs. Hadfield, Walker, Burnett, W. F. Livesey, Arkle, Mercer, Topping, Pomfret, Walmsley, Geo. F. Livesey, Hindle, Williamson, Fisher, and Freeman were present. An address delivered by the Hon. President (Mr. J. E. Walker) formed the principal business of the evening. Mr. Walker said that the present is an age of syndicalism, when not only the retail chemist but almost every other business is handicapped by the fiercest competition. The doubtful issues of State Insurance and the enormous demand for unprofitable patent medicines, sixpenny doctors, and medical botanists are other discouraging influences. He thought they would need each other's counsel more than ever, and there obtained among them a more fraternal feeling than formerly. The preparation of a list of new or unusual preparations and where they could be obtained in Preston was mentioned, and the suggestion made that rules should be so framed that the Association should combine to cover any loss due to stocking these. Co-operation in buying proprietary articles first-hand was another subject broached in the address. The President (Mr. Hadfield) also gave a short address, after which

Messrs. Burnett, Livesey, Hindle, and Topping entered into a discussion *re* proprietary medicines and their prices. A whist-drive and supper had been arranged to take place on November 7, but owing to an announcement in the local Press *re* whist-drives it was resolved that a deputation of Messrs. Burnett and Freeman arrange an interview with the Chief Constable, and report the result.

TRADE-MARKS.

Objections to the registration of any of the undermentioned applications must be stated on Form T.M. No. 7 (obtainable at Money Order Offices for £1) and lodged with Mr. Temple Franks, Comptroller-General, Patents Office, 25 Southampton Buildings, Chancery Lane, London, W.C., within one month of the dates mentioned.

The figures in parentheses refer to the classes in which the marks are desired.

(From the "Trade-marks Journal," September 4, 1912.)

- "MOTHINE," for insect-destroyer (2), and "KOLASAN," for a food (42). By C. Richter & Co., 59-61 New Oxford Street, London, W.C. 342,743, 344,543.
- "GAPEX"; for a medicated preparation for birds (2). By E. Fison, Ltd., Bridge Street, Ipswich, Suffolk. 343,843.
- "PLANTONYX"; for chemical substances (2). By Hermann Becker, Five Oaks, St. Saviours, Jersey, Channel Islands. 344,403.
- "GLYVER"; for chemicals (2 and 3), for perfumery, etc. (48), and a polishing preparation (50). By Lever Bros., Ltd., Port Sunlight, Cheshire. 344,452/3/4/5.
- "NETROSYL"; for goods (3). By Meister, Lucius & Brüning, Hoechst a/Main, Germany. 341,745.
- "SANADOL"; for a medicine (3). By F. W. Hylton, 2 Pelham Street, Lincoln. 342,931.
- "JUPHLOX"; for chemical substances (3). By Joubert Medicine Co., 44 West George Street, Glasgow. 343,832.
- "VARICOLIUM ELIXIR"; for all goods (3). By Chas. Gordon, 60 Great Russell Street, Bradford, Yorks. 343,897.
- Facsimile of label showing man's head; for health-salts, etc. (3). By William Hill, 8 Watson Street, Glasgow. 344,069.
- "EUSULFORM"; for chemicals (3). By Ludwig Kaufmann, 2 Martin Lutherstrasse, Berlin. 344,133.
- "ROSTIKON"; for chemicals (3). By Nyegaard & Co., Øvre Voldgate 11, Christiania, Norway. 344,266.
- "ELARSON"; for chemicals (3). By the Bayer Co., Ltd., 20 Booth Street, Manchester. 344,278.
- "FEBRILIN"; for a medicine (3). By the Standard Tablet and Pill Co., Ltd., Hove, Sussex. 344,326.
- "FORMAPINE"; for a medicine (3). By the Standard Tablet and Pill Co., Ltd., Hove, Sussex. 344,327.
- "EXY" in facsimile of signature "H. BURNELL"; for a medicinal preparation (3). By Henry Burnell, Gamage Buildings, 118-122 Holborn, London, E.C. 344,417.
- Initials "P. L." in a sun device; for perfumery (48). By Ernesto Lowenstern, 31 Calle Sagasta, Madrid, Spain. 343,218.
- Device of filtering liquid into beaker; for perfumery, etc. (48). By Van Essen, James & Co., Ltd., 100 Bermondsey Street, London, S.E. 344,660.

SAMPLING DRUGS.—A correspondent vouches for the accuracy of the following story, since he has the pleasure of knowing both the pharmacist and the food and drugs inspector:

As anyone knows who is acquainted with life in a small country town, the advent of the county police conveyance is a matter for comment. My friend the pharmacist has a sharp assistant, who, seeing the well-known trap, passed the word, "The inspector's dog-cart has just gone down, sir." In a few minutes a well-dressed and polite stranger entered and asked for "an ounce of Gregory's powder."—"Will that be sufficient?"—"Yes, thank you."—"But you cannot very well divide one ounce into three parts; had you not better take three ounces?" suggested the chemist.—The inspector was rather taken aback; as the town in question was not in his "division," he had judged that nobody knew him there, but, seeing that "the cat was out of the bag," he smilingly replied, "Perhaps I had better take three ounces." When the package was handed over the usual formula was gone through, and then the pharmacist good-humouredly informed the representative of the law that he would find the "Gregory's" all right. "Your people have already—some two years ago—'sampled' from the same stock, in fact." I do not think he has been asked for Gregory's powder since.

TRADE REPORT.

The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers receive the goods into stock, after which much expense may be incurred in garbling and the like. Qualities of chemicals, drugs, oils, and many other commodities vary greatly, and higher prices than those here quoted are charged for selected qualities of natural products even in bulk quantities. Retail buyers cannot, therefore, for these and other reasons, expect to purchase at the prices quoted here.

42 Cannon Street, London, E.C., September 12.

AT this period of the year an active trade is looked for, but up to the present, judging from opinions expressed by market men, it is not yet in evidence. Apart from this, however, surprise is expressed at the August exports of chemicals and allied products, which show an enormous increase in the volume of business. Meanwhile the tendency of values, principally chemicals, is still upwards, owing to higher working costs and scarcity in some instances. These include an advance in ammonium chloride, arsenic, copper sulphate, potassium prussiate, calcium chloride, and all lead compounds. Oxalic acid is also firmer. Quinine is cheaper, with influential "bear" interests at work. French glycerin-makers have advanced the price of chemically pure. Quicksilver is easier in second-hands. Emetine hydrochlor. is dearer. In drugs and essential oils few changes are shown. Cod-liver oil is very firm, but quiet, and copaiba is easier; Florentine orris is very dear. Star-anise oil is firmer to arrive; Sicilian essences are unchanged; and American peppermint oil is very firm, with a fair business for forward delivery. At the spice-auctions Cochin ginger and chillies were cheaper. The principal alterations are as follows:

Higher	Firmer	Easier	Lower
Ammon. chlor.	Anise oil	Copaiba	Chillies
Arsenic	(star) c.i.f.	Cubeb oil	Ginger
Calcium	Oxalic acid	Glucose	(Cochin)
chloride	Petroleum	Quicksilver	Linseed oil
Copper		(seconds)	Quinine
sulphate		Turpentine	(sec. hands)
Emetine			
hydrochlor.			
Lead			
compounds			
Potash			
prussiate			

Cablegram.

NEW YORK, September 12.—Business in drugs is fair. Opium is firm at \$7.60 per lb. Peppermint oil in tins is firmer at \$2.55. Buchu is steady at \$1.65 for round. Balsam tolu is scarce at \$1.75. Cascara sagrada is easier at 8c. Senega is steady at 62c., and mandrake (podo-phyllum) is easy at 6c. per lb.

London Markets.

ACETANILIDE remains very cheap, in spite of the rising tendency of acetic acid; 1-cwt. lots are quoted 9½d. per lb.

ACETIC ACID is unaltered, but supplies are difficult to obtain. Glacial (99 to 100 per cent.) is quoted 36l. 10s. per ton, and 98 per cent. 36l.

ACETONE.—The spot price for Government quality is 80l. per ton.

AMMON. CHLOR. has been advanced by 10s. per ton to 30l. 10s. for large crystals in contract quantities of five to ten tons, and 31l. in single packages, with the usual extras for medium and small crystals.

ANISE OIL (STAR) is firm, with spot business at 6s. 1d. for "Red Ship," and to arrive 5s. 9d. is quoted, 5s. 8d. having been refused.

ARSENIC has advanced by 2l. per ton, the quotation for best white Cornish powder being 20l. 10s. in barrels and 21l. 10s. per ton in kegs.

ASAETIDA.—Fully 400 packages of mostly new arrivals will be offered next week.

BALSAM PERU.—Guaranteed genuine is quoted at from 7s. to 8s. per lb., according to seller.

BUCHU.—No arrivals have taken place this week. Market remains firm at from 6s. 6d. to 7s. for round, down to 5s. for common yellow.

CALCIUM CHLORIDE.—One of the largest makers announces that for delivery from October 1, 1912, the price of 70 to 75 per cent. has been advanced by 5s. per ton.

CAMPHOR (REFINED).—Sellers of Japanese 2½-lb. slabs quote 1s. 6d. and 1-oz. tablets at 1s. 7d. c.i.f.

CANNABIS INDICA.—A fair quantity of East African has been sold at about 1s. per lb.

CHAMOMILE OIL.—The good English crop this season enables English distillers to slightly reduce their price for new oil, which will be ready shortly; 5s. 3d. per oz. net is quoted.

CHAMOMILES remain unchanged at the prices quoted last week. Arrivals include 30 bales from Antwerp.

CITRIC ACID is steady at 1s. 4½d. for foreign and 1s. 5d. for English.

COD-LIVER OIL is very firm at from 69s. to 70s. per barrel c.i.f. for finest brands, but business is very limited; spot is worth from 71s. to 72s.

COPAIBA is easier, filtered B.P. offering at 1s. 11d.

COPPER SULPHATE is 5s. to 10s. per ton higher, ordinary Liverpool brands (98 to 99 per cent.) offering at from 25l. to 25l. 5s., and spring delivery at 26l. per ton.

CREAM OF TARTAR is very firm at 89s. for 98 per cent. and 87s. for 95 per cent. powder.

CUBEB OIL is cheaper at 15s. per lb. for English distilled.

EMETINE HYDROCHLORIDE is much dearer. Hitherto the demand has been quite limited, and supplies adjusted accordingly. Now it would appear that there has been rather more inquiry following upon its use in dysentery, especially for India (see *C. & D.*, September 7, index folio 413). This demand finds the makers without adequate supplies, hence a German manufacturer has advanced his price from 5s. per gram to 16s. 3d. The alkaloid is also manufactured in England, and the makers have been selling at 2s. 2d. per gram, but on Wednesday they raised their price to 2s. 6d., and to-day 3s. is quoted. It is probable there will be ample supplies later, as most of the alkaloid makers in this country will return to its manufacture now that the article is likely to be in more regular demand.

ERGOT.—Russian on the spot is quoted at from 3s. 9d. and German at 3s. 6d., but for shipment from the Continent 3s. 7d. c.i.f. is wanted for German, being dearer.

EUCALYPTUS OIL is very firm, with a continued rising market reported from Australia. Further sales of B.P. oils have been made at 1s. 5d. Globulus is offered at 1s. 6d. and Amygdalina 10d. to 11d. per lb.

GLUCOSE.—With more regular deliveries now taking place the position is less stringent, and supplies of liquid are available at 14s. per cwt.

GLYCERIN.—The Association of French refiners have advanced the price of chemically pure by 10 fr. per 100 kilos. (= to 4l. per ton). The British market for this description is very firm, with a good inquiry and not much in second-hands. The official price of double-distilled s.g. 1.260 is 87l. per ton in drums and 91l. in cases in usual contract quantities. There appears to have been heavy buying of crude on the French market for American account.

IRISH MOSS.—Small sales of common brown have been made at 25s. per cwt. net.

JALAP.—The manifest of the *Minnehaha*, from New York, reports an arrival of 320 bags jalap, but this has proved to be Mexican scammony-root.

LEAD COMPOUNDS.—There has been a considerable advance in pig lead, the immediate cause of which appears

to be due to the fact that a large consumer who for some months did not believe in the firmness of the market sold "short" and has now been covering, with the result that the market has been in a semi-panic. Other contributory causes are the recent coal strike, floods in Spain, labour troubles in Australia, but chiefly the revolution in Mexico. Formerly Australia shipped large quantities to this country, but the bulk now goes direct to China and Japan. We understand that the Syndicate will not in all probability allow the price of pig lead to go beyond 25*l.* per ton. All lead compounds have been effected, the following being the nearest prices: *Nitrate*, 29*l.* 10*s.* to 30*l.* 10*s.*; *Acetate*, 27*l.* 10*s.* to 28*l.*; *Red lead*, English, 25*l.* 10*s.* to 25*l.* 15*s.*; *White*, 25*l.* to 27*l.* 15*s.* *Litharge* is quoted 27*l.* 10*s.*

LEMON OIL.—Prices cabled from primary markets and those on the spot remain unchanged. Guaranteed pure is quoted 8*s.* to 8*s.* 2*d.* c.i.f. for prompt shipment, and new crop from 6*s.* 10½*d.* to 7*s.* 4*d.* c.i.f. (one agent quotes 7*s.* 5½*d.*); business has been done at 7*s.* 3*d.* c.i.f. for December-March shipment.

A Palermo advice dated September 7 reports that the demand for spot oil continues very persistent, especially from Germany, where some of the larger buyers have been laying in good-sized parcels so continually as to make one believe that they had entirely exhausted their stocks. Available stocks being light and in strong hands, it has not been difficult for holders, after having sold earlier in the week at almost unchanged figures, to squeeze out gradually higher prices. The movement has not been marked by the usual excitement, as business in spot oil has during the past few weeks responded to actual requirements. For new crop the tendency was rather uncertain at the beginning of the week. Buyers were not inquiring so actively for forward contracts, and, as it generally happens after a rapid advance, the tendency was slightly easier—only fractionally so. New-crop oil is being influenced by the position of spot goods, and the market closes steadier also for forward delivery.

MENTHOL remains firm, the inquiry from consumers being mostly for tins: 28*s.* 6*d.* per lb. is quoted on the spot, and forward business is quiet. In Hamburg, however, a large business has been done in several positions (also spot) at full prices. To-day business is reported at 24*s.* 6*d.* for September-October shipment of menthol alone.

MILK-SUGAR is steady at from 63*s.* to 64*s.* per cwt. for best white powder.

MORPHINE.—Very quiet at from 10*s.* 3*d.* to 10*s.* 6*d.* per oz. for hydrochloride powder.

NEROLI OIL.—Sales have been made at 12*s.* per oz. for genuine.

OILS (FIXED).—*Linseed* is cheaper, closing at 33*s.* 3*d.* in pipes and 33*s.* 6*d.* in barrels. *Rape* is unchanged at 31*s.* 9*d.* for ordinary brown crude and 33*s.* 3*d.* for English refined in casks. *Cottonseed* is quiet at 25*s.* for crude on spot, 26*s.* 6*d.* for ordinary pale refined, and 29*s.* 9*d.* for sweet refined. *Coconut* is steady at 41*s.* for Ceylon and 45*s.* for Cochin. *Soya* in barrels is 29*s.* 6*d.* spot. *Petroleum* is fractionally firmer for American, which is 8*d.* to 8½*d.* for ordinary refined and 9*d.* to 9½*d.* for water white. Russian is unchanged at 7½*d.* net. *Turpentine* closes at 30*s.* 7½*d.*

OPIMUM.—The easier tendency noted last week is still apparent, with practically no forward business to support prices, which for 11-per-cent. druggists' is 20*s.* nominally; on the spot small sales of this test have been made at 21*s.* 6*d.*, and in good "soft shipping" sales have been made at 27*s.* 6*d.*

A Smyrna correspondent writes on August 30 again reporting an active week, the sales amounting to about 145 cases, mostly for speculation, at gradually advancing prices, bringing up our quotations 17*s.* to 19*s.* for old and new common current talequale 9 per cent. to 10 per cent., and 20*s.* to 23*s.* for Karahissar druggists' and Yerli, as to quality, crop, and appearance. The arrivals in Smyrna amount to 1,024 cases, against 534 at same date last year.

A Salonica correspondent writes on September 4 that, after having been very active, our market shows a slackening off, due to the rapid advance in prices, which in the space of three weeks have risen from 310 piastres to 370 piastres per oke for opium from the provinces of Keuprulu and Tikfich, analysing about 14 per cent. At the last prices a few cases have been sold, and holders who

formerly showed great reluctance to sell now show more disposition to liquidate, without, however, deciding to make any concessions. Prices remain nominally firm at about 370 piastres, and if the reserve observed by buyers continues for some time we believe that holders will make some concessions. On the other hand, if the demand increases we shall see prices exceeding 400 piastres per oke, on account of the very reduced stocks. In fact, of a crop of about 90,000 okes (by this figure we mean only the crop of Macedonia exported from Salonica) there only remains 18,000 okes in stock, the remainder having been already sold.

A Constantinople correspondent writes on September 6 stating that the sales for the week amount to 11 cases druggists' quality (of which three were for speculators), at from 290 to 310 piastres, and 23 cases Hadjikeui at from 334 to 345 piastres per oke. Market is quiet, and if buyers hold off for several days we can count on holders being less exacting and prices more reasonable. During this week Smyrna prices, which were above those ruling in Constantinople, have declined to our parity, with a sale of 35 cases at from 190 to 200 piastres per chequi.

The following table shows the value of opium exported from Persia during the years 1908-9 to 1910-11:

Country	1908-9 £	1909-10 £	1910-11 £
British Empire ...	75,916	103,700	75,620
Turkey ...	44,620	114,904	75,931
China ...	138,834	111,880	46,620
Russia ...	16,377	17,994	43,208
Indo-China ...	—	—	17,140
Germany ...	—	—	1,080
Belgium ...	9,980	1,329	—
Egypt ...	6,528	2,100	3,800
Other countries ...	374	—	—
Total ...	287,629	351,907	263,399

ORANGE OIL is unchanged, with a hand-to-mouth business in primary markets; *sweet* of the last crop is quoted 8*s.* 5½*d.*, new crop 7*s.* 8*d.* to 7*s.* 10½*d.*, and *bitter* of the last crop 8*s.* 6*d.* per lb. c.i.f. London.

ORRIS remains very dear, and some exporters are unable to offer. On the spot good Florentine sorts are worth 50*s.* to 52*s.* 6*d.* and selected 55*s.* to 57*s.* 6*d.* per cwt.

OXALIC ACID is a shade firmer at from 3½*d.* to 3½*d.* per lb. net delivered free London.

PEPPERMINT OIL.—American tin oil has been in brisk demand, principally for parcels to arrive. The best brands are quoted at from 10*s.* 9*d.* to 11*s.* per lb. for September-November shipment, landed terms; for November shipment rather less has been paid in one quarter, but after a fair quantity had been sold the price was subsequently withdrawn. H.G.H. is quoted 15*s.* 3*d.* London terms, and H. and P. has been sold at 14*s.* 3*d.* There are sellers of Japanese (Suzuki) for November-December shipment at 5*s.* 9*d.* and December-January at 5*s.* 7½*d.* c.i.f.

POTASSIUM PRUSSATE is very scarce, with second-hand holders offering a limited quantity at 6½*d.* to 7*d.*. Makers do not quote, and are well sold over next year.

QUICKSILVER.—First-hands is unchanged at 8*l.* 5*s.*, and in second-hands 8*l.* 1*s.* 6*d.* is quoted, being cheaper.

QUININE has declined by 1*d.* per oz. in second-hands. Last week a sale of 10,000 oz. German was made at 8½*d.*, at which there were further buyers, but sellers ask 8½*d.*, which has also been paid. It may be pointed out that October deliveries (for which very heavy quantities were sold) will be shortly due, and this added to the fact that several of the leading operators are on the "bear" tack accounts for the lower prices.

SANTONIN.—No advance has yet been announced on the part of the Syndicate; meanwhile limited quantities can be had from second-hand holders at 90*s.* per lb.

SARSAPARILLA.—The *Tagus* has brought 20 packages native Jamaica.

SCAMONY-ROOT.—The *Minnehaha* has brought 320 bags Mexican from New York; the values are from 32*s.* 6*d.* to 40*s.* per cwt., according to test.

SENEGA.—Thirteen bales have arrived from Montreal; to arrive the high price of 2*s.* 7*d.* to 2*s.* 8*d.* c.i.f. is quoted, which is considered too high to permit of business.

SENNA.—There is a fair inquiry for Alexandrian siftings, but there is little available.

SHELLAC.—At auction 185 cases second Orange sold without reserve at steady private rates to easier. Good pale seconds sold at 72s. to 73s.; barely fair, 64s. to 65s.; and ordinary dull, 64s. to 65s. Privately the demand continues very quiet, with small sales on a basis of 66s. 6d. to 67s. for fair TN Orange. For arrival November-December shipment of TN is offered at 66s. 6d. and A.C. Garnet at 61s. 6d. c.i.f. Futures are steady but quiet.

SPICES.—At auction 180 bags common wormy washed rough Cochin *Ginger* sold without reserve at 25s. to 28s. 6d.; 47 bags of good small ordinary Jamaica were bought in at 54s. Ten cases Natal *Arrowroot* sold at 9d. for good. *Gloves* are firm at 7½d. spot, which has been paid; for arrival September-November shipment has been sold at 7½d. to 7½d., and October-December at 7½d. c.i.f. and buyers; for October-December delivery 7½d. is quoted, and January-March 7½d. Of *Chillies* 40 bags Japanese sold without reserve at 27s. for good red; 508 bags Nyasaland *Capsicums* were bought in at 20s. to 28s. West Indian *Nutmegs* were dearer, and West Indian *Mace* steady. Of *Pepper* 80 bags fair Ceylon sold at 5½d. to 5½d. for fair to good and 5d. to 5½d. for small; privately the spot price of fair Singapore is 5½d. Of *White pepper* 75 packages Ceylon offered, and 50 cases sold at 10½d. for fine and 8½d. for small; private markets are firmer, with sellers at 9d. and Muntok 9½d. spot. *Cinnamon chips* (60 bags), ordinary Ceylon, were bought in at 2½d.

SQUILL.—Fair white are offered at 3d., medium at 2½d., and brownish 1½d. per lb.

TARTARIC ACID is firm at 1s. 1d. spot for foreign, and for January-June 1913 delivery 1s. 0¾d. is quoted. English is 1s. 1½d.

VANILLA.—According to the annual Colonial report on the Seychelles for 1911, vanilla yielded almost the smallest crop on record—viz., 11,008 kilos., valued at Rs. 223,200. The plants were healthy, but the flowering season was utterly spoilt by unseasonable rainfall. The last good crop was in 1907, when the harvest yielded a million rupees. The crop for 1912 will be as low as that of 1911; but if nothing untoward occurs during August and September of this year there should be a large crop in 1913. The report also states that "there is no longer much dread of the artificial product (vanillin) ousting the genuine article in popular favour." The exports to the United Kingdom in 1911 were 5.8 tons, valued at Rs. 117,807, and 4.75 tons, valued at Rs. 96,666, to France.

Manchester Chemical Market.

September 10.

Returns of exports for the past month show a fair increase, due probably to additional quantities required through the late strikes. On home account it cannot be said that there has been an encouraging demand. There is also great uncertainty attending deliveries of heavy chemicals, but there is more inquiry forward in this department, and there is a hardening tendency in prices. This is especially the case in bleaching-powder and caustic soda, in which a revision of the present list will shortly take place. Owing to an upward movement in the price of slack and other engine fuel, it is pretty certain there will be an advance at no very distant date. Nitrate of lead is again on the up-grade, owing to a sharp advance in the raw metal, and although 30l. per ton is the ordinary quotation, prices are quite nominal, and probably 20s. to 30s. per ton advance may be needed on the above figure. Sulphate of copper has also appreciated in value, and is quoted 25l. 12s. 6d. to 26l. per ton, best brands, for delivery Manchester; for forward delivery prices are 7s. 6d. to 10s. per ton higher. Brown acetate of lime is easier for American at 7l. 15s. per ton c.i.f., and grey 13l. 10s. per ton. Solvent wood naphtha (white colourless) quiet at 2s. 9d. to 2s. 10d. and miscible 2s. 10d. to 2s. 11d. per gal. Coal-tar products show little change generally. Sulphate of ammonia is firm at 14l. 10s. to 14l. 11s. 3d. per ton f.o.r. Manchester.

Heavy Chemicals.

At all main centres of the heavy-chemical industry a brisk business, both on prompt and forward account, is being transacted at full prices, and, generally speaking, higher costs of manufacture tend towards advanced figures. Export demand is good.

SULPHATE OF AMMONIA maintains a firm tone, and stands

a shade higher for forward. Present nearest figures: Beckton, 25-per-cent. ammonia guaranteed, prompt, 14l. 2s. 6d.; London terms, 14l.; Leith, prompt 14l. 15s., January-June 14l. 18s. 9d.; Liverpool, prompt 14l. 15s., January-June 14l. 15s. to 14l. 17s. 6d.; Hull, 14l. 10s.

BENZOLS are steady. Present naked figures: 90 per cent. 1s. 1d. and 50 per cent. 11d. to 11½d.; North, 1s. to 1s. 1d. and 10½d. to 11d. respectively.

LEAD PRODUCTS are a very firm market, and prices are higher, though somewhat fluctuating. Present nominal figures: Dry white lead, 26l. 10s.; red lead, 24l. 5s. to 24l. 10s.; pig lead, 23l.; and sheets, 24l. 15s. per ton Tyne.

ALUMINA PRODUCTS are in steady request and firm. Crystal alum, lump, 5l. 15s. to 6l. 5s., and ground, in bags, 6l. 5s. to 6l. 15s. per ton free on rails Lancashire or Yorkshire, or f.o.b. Hull, Goole, or Liverpool. Sulphate of alumina tends higher; purest qualities and practically free of iron 4l. 17s. 6d. to 5l. 7s. 6d. per ton in casks for ordinary strength, with customary allowances for loose slabs and usual extras for higher concentrations. Alumino ferric 52s. 6d. to 57s. 6d. and aluminous cake 50s. to 60s. per ton, according to quality, quantity, and destination. Hydrate of alumina, high strength Al₂O₃, and purest quality, 12l. 10s. to 13l. 10s. per ton in casks free on rails. Aluminate of soda, purest quality and high strength Al₂O₃, 30s. to 32s. 6d. per cwt. Carbonate of alumina, 30s. to 32s. 6d. per cwt.

BARIUM COMPOUNDS continue to move well and are steady. Blanc fixe, pure precipitated sulphate of barium, in paste form, 6l. 10s. to 6l. 15s. per ton in 8 to 9 cwt. casks. Mineral sulphate of barytes, 35s. to 90s. per ton, according to quality, quantity, and package. Chloride of barium crystals, in 8 to 10 cwt. casks, 5l. 7s. 6d. to 5l. 17s. 6d. per ton. Precipitated carbonate of barium, 5l. 10s. to 6l. 5s. per ton in 2-cwt. bags. Crude calcined barium sulphide, 70 to 75 per cent. BaS, 5l. 5s. to 5l. 15s. per ton in 5 to 6 cwt. casks.

Continental Drug and Chemical Markets.

DEXTRIN.—Business is very limited; a change to lower prices is expected as soon as the new potato-crop, which is said to be promising, appears. At the present price of m.40 to m.41 only the most urgent wants are bought; from October the first appearance of the new crop must be reckoned with.

ERGOT.—The Hamburg market remains firm, and it would appear as if the present high prices are likely to prevail for some time. Russian is quoted m.7.50 to m.8., and Spanish at m.9.50 to m.10 per kilo.

GLYCERIN.—According to Marseilles advices, contracts have recently been made over 1912 for saponification quality at 140 fr. to 142.50 fr., and over 1913 at up to 145 fr. per 100 kilos. Lye (80-per-cent.) has been done at 118.50 fr. over 1912 and 120 fr. over 1913. Market is consequently firmer, and buyers are reserved.

PECACTANHA has been in demand in Hamburg during the past week. Practically everything at quoted has been taken up by consumers. Carthage is quoted m.17 and Rio m.17.50 per kilo.

TIN OXIDE.—Owing to the advance in tin the price of tin oxide rose from m.387 to m.394 per 100 kilos; at the same time sharp competition is taking place between the makers.

ZINC OXIDE.—The metal-market has become decidedly more active lately, and some large consumers were obliged to buy considerable quantities for September deliveries. Accordingly zinc oxide has been raised by the Convention by m.1 per 100 kilos.

Seychelles Essential Oils.

According to the annual Colonial Office report on the commerce of the Seychelles for 1911, the distillation of essential oils is making steady progress. There were 844 litres exported in 1911, of which the greater proportion was oil prepared from the leaves of the clove-tree (clove-leaf oil); but oil of cinnamon-leaf will probably be the largest in 1912. Much ylang-ylang has been planted, but no oil has yet been exported. Lemongrass oil is also of growing importance.

American Peppermint Oil.

Messrs. R. W. Greiff & Co., agents for F. M. Rudd's American peppermint oil, in a circular dated September 12, state that "since our last report was issued we learn that torrential rain has fallen over large tracts of the producing districts of Michigan and Indiana, causing serious damage to the growing peppermint and retarding distilling operations. The crop is not yielding anything like the quantity originally anticipated, and is actually averaging less per acre than last year's production. It is believed, however, that the increase in acreage will counterbalance the decrease in yield, and that the total crop will approximate closely to that of 1911. In consequence of the unfavourable weather conditions, the growers are disinclined to sell freely, and prefer to wait until the market is more settled before booking large orders. Limited sales have been effected at

10s. 9d. per lb., and we are prepared to cable further orders at the same price. We confidently anticipate a sharp rise in the immediate future, and recommend our clients not to delay in purchasing their requirements for the season."

Linalool.

H.M. Consul at Tamsui (Mr. J. B. Rentiers), dealing with the trade of Formosa in 1911, states that experiments have been conducted for some time by the Camphor Department of the Monopoly Bureau with a view to the production on a commercial scale of a substance known as linalool, used in perfumery as a substitute for lemon oil, which has been scarce and very dear since the disastrous earthquakes in Sicily. This substance is found in *shū yu*, the oil obtained from a species of camphor-tree called *shū-shō-boku*, or sinking camphor-tree, the oil of which has an unpleasant smell and is therefore unfit for the manufacture of camphor. It is stated that linalool can be obtained from the oil of the true camphor-tree, but that the extraction of camphor from it is more profitable. The Monopoly Bureau is now in a position to produce the above-mentioned oil to the extent of about 65,000 lb. a year. The percentage of linalool contained in the crude oil varies greatly, but it is stated that the oil to be produced by the Bureau will contain 60 per cent. of linalool. Linalool has hitherto been produced in Mexico and Venezuela, but only in very small quantities. There is said to be sufficient material in Formosa at present for the production of 2,500,000 to 3,000,000 lb. of the crude oil, and the production is expected to be great. The price of linalool in Europe and America is said to be about 8 yen (16s. 4d.) per lb. The crude oil can, however, be produced in Formosa at less than half that cost. The export will be in the hands of the Monopoly Bureau; the price has not yet been fixed, nor has it been decided to what countries it will be exported. The Consul has forwarded samples of this product which may be seen by British firms at the Commercial Intelligence Branch of the Board of Trade, 73 Basinghall Street, London, E.C. We quote this from the "Board of Trade Journal" without attempting to correct mis-statements.

German Spirit.

A circular was recently issued by the Spirit Centrale to the members of the German Association of Spirit Manufacturers, stating that their business-year of 1911-12 terminates on September 15. This circular is to the effect that although there has been as yet no reliable indication as to the results of the commercial year and the price actually realised, it is expected that, after allowing for the difference of 6m. and 4m. on the quantities handled on the basis of the rebate price of 44m. and 46m, respectively (against 50m., the former rebate price), an additional payment on the total deliveries may yet become available. The production up to September 15, so far as agricultural distilleries are concerned, is subject to a special working allowance of 3m: to be borne by the distiller. The business-year does not correspond with the Customs yearly returns for the distilleries, as the Customs-year begins on October 1 and ends on September 30 of the ensuing year. The production from September 16 to September 30, 1912, therefore falls into the Customs-year 1911-12, and is rated for the current year on the basis of an average quality fixed at 120 per cent. The new business-year 1912-13 begins on September 16. The Committee of the Spirit Centrale has fixed the rebate price for future deliveries in so far as they will be declared through the Custom House from September 16 inclusive at 52m. For the coming business-year the National Council has, as already known, granted 100 per cent. for the average quality. The distilleries are thus able to make arrangements for a minimum of their production for the complete fulfilment of their average quality. Prospects to meet demands in the next few months have improved, thanks to the very liberal production in June and also in July, although the increase in the latter month did not quite come up to expectations. The reduction in the consumption for drinking purposes did but little to ease the situation, as it was offset by an increase in the demand for industrial purposes. In order to alleviate the stringency pending the full development of the new production, ample receipts of spirit in September and also in October have to be relied upon. The request is thus again urged that members of the Association should push operations vigorously and as much as possible in September and October.

Candelilla Wax.

The British Consul for Tampico, in his annual report, states that a considerable amount of interest has been shown in the Monterrey district in the production of wax from the candelilla weed, and several plants have recently been installed, the principal companies operating being the Luna Manufacturing Co., at Luna, on the border of the States of

Nuevo León and Coahuila; the Export, Extract, and Refining Co., at Bustamante, Nuevo León; the Cia. Mexicana de Cera de Candelilla, S.A., at Galeana, Nuevo León. The two first are American companies and the last French and Mexican. The Luna Manufacturing Co.'s plant has a capacity of 25 tons of wax per month, and they are about to erect a second plant of similar capacity. Their product, which finds a ready market in the United States of America, the United Kingdom, and Germany, has a melting-point of from 67° to 76° C. The candelilla plant, which produces the wax, only grows in the most arid regions (the western part of Nuevo León and Coahuila being the best). The weed found growing in well-watered districts contains little or no wax.

The Formosan Camphor Industry.

The following information (from the "Board of Trade Journal") is from the report by H.M. Consul at Tamsui on the trade of Formosa in 1911, which will shortly be issued: The export of camphor showed a decrease of 872,554 lb. in 1911. The quantities shipped to the various countries were as follows:

	Lb.
Germany	2,374,666
United States	2,039,500
France	562,267
United Kingdom	472,000
British India	126,000
Austria-Hungary	33,333
Japan	5,952
Total	5,613,718

The estimated output of refined camphor by the Monopoly Bureau's refinery during 1911 was 7,267,000 lb. The number of owners of crude camphor works was fourteen, but the number of works exceeded this. It is stated that no new licences will be issued during 1912 as the authorities still hold surplus stocks brought over from two years ago. The estimated receipts of crude camphor and camphor oil for the financial year 1911 were 6,264,000 lb. and 7,272,000 lb. respectively. These quantities were received, though in part after the turn of the year, the late receipts being brought over to the following year. The prices paid by the Monopoly Bureau for crude camphor and oil were:

	Yen	sen.	£ s. d.
"A" quality	47	90	4 17 9
"B" quality	44	90	4 11 8
"C" quality	41	90	4 5 6
Camphor oil	24	20	2 9 8
* 132.277 lb.			

The estimated demand in Japan for Formosan camphor during 1911 was 3,280,000 lb., to be extracted from the oil sent over. The quantity of camphor sent was very small. This demand is expected to increase considerably this year in consequence of the newly established manufacture of celluloid. The improved refining machinery installed by the Bureau last autumn is said to give satisfactory results, producing camphor to the amount of 48 per cent. of the weight of oil used; this camphor is of superior quality—viz. 93 per cent. pure containing only 2 per cent. of oil and 5 per cent. of water. The distillation is effected by steam heat, steam being also forced through the oil during distillation. A portion of the savage district subjugated last year in the Shinchiku Prefecture contained a forest of 2,000 acres particularly abundant in camphor-trees. The areas from which camphor may be collected by the holders of licences are not, however, extended on the addition of further camphor-producing areas to the subjugated territory through the advance of the guard line. The Government has since 1906 encouraged the planting of camphor-trees by distributing seedlings gratis. Over 3,000,000 plants were distributed in 1911. As the result of experiments carried on for five years, the Bureau will commence the distillation of camphor from leaves on a practical scale this year. A considerable area has been afforested for this purpose. Leaves will be gathered from the young trees. The best results were obtained from the use of the leaves only, branches not being cut; 1.3 per cent. of camphor was obtained in this manner together with 0.4 per cent. of oil. Camphor afforestation has been carried on for some time by the Bureau of Productive Industries. The area afforested, now amounting to nearly 10,000 acres, will in the coming financial year be handed over to the Monopoly Bureau, which will in that year plant another 1,200 acres. From the following year, 1913-14, it is intended to plant some 3,000 acres annually with young camphor-trees at a cost of 20,000. This is to be continued for twelve years, after which it is estimated that the annual production from this area will be some 6,500,000 lb. of camphor and a like quantity of camphor oil.



Memoranda for Correspondents.

All communications must be accompanied by the names and addresses of the writers, otherwise they cannot be dealt with.

Queries by subscribers on dispensing, legal, and miscellaneous subjects connected with the business are replied to in these columns if they are considered to be of general interest.

Letters submitted for publication (if suitable) should be written on one side of the paper only. Their publication in "The Chemist and Druggist" does not imply Editorial agreement with the opinions expressed.

Validity of Registered Trade-marks.

SIR,—Your correspondent "Perplexed" is perhaps not familiar with Section 41 of the Trade-marks Act, 1905, which is as follows:

"In all legal proceedings relating to a registered trade-mark (including applications under section thirty-five of this Act) the original registration of such trade-mark shall after the expiration of seven years from the date of such original registration (or seven years from the passing of this Act, whichever shall happen first) be taken to be valid in all respects, unless such original registration was obtained by fraud or unless the trade-mark offends against the provisions of section eleven of this Act."

Section 11 of the Act states that no trade-mark may be registered that offends against law or morality or is scandalous in design. The importance of Section 41 will be seen by the following comments of Sebastian in his standard work on the Law of Trade-marks:

"It is a very important alteration of the law. It has hitherto been considered that if a trade-mark was registered, which was not entitled to registration, such registration was wrongful as against any person who might be affected by it, and the wrong so inflicted was open to correction at any time at the instance of the person improperly interfered with. In future, if a person has had for seven years a registration which never ought to have been effected at all, he will be entitled to retain it for all time subject to the usual periodical renewals."

Hence whether the words "Gripe Water" were or were not entitled to registration is of no moment. The fact that they have been registered for more than seven years renders them a perfect valid trade-mark and entitles them to the usual legal protection against infringement. The only remedy that traders may have is to satisfy the Court that the owners by their own laches (delay) have lost their right to that protection, and that the words have in fact become *publici juris*—that is, the use of them may be thrown open to the public—by the proprietors allowing their right to be so habitually infringed that the trade-mark no longer conveys to those who see it the impression that the goods to which they are attached are of their manufacture. In order to do this it would be necessary to prove that a number of traders have used the words "Gripe Water" for a considerable number of years for their preparations without having been interfered with by the owners of the trade-mark.—Yours faithfully,

79 Mark Lane, E.C.

M. S. SALAMON.

The National Insurance Act: The Real Feeling of the Doctors.

SIR,—Perhaps this heading ought to be "The real feeling of some of the doctors," for though I have seen and spoken to not a few, it is quite possible that these may not be representative of the majority. The opinions of such men as I have seen are certainly not so adverse to the Act as we have been led to believe. Take the following case: The doctor is a general practitioner with a small country practice, and I meet him once a year or so on the occasion of my annual holiday. This year our talk turned very frequently on the attitude of the profession to the Act, and the substance of his replies to my inquiries may be stated in his own words:

"I am not against the Insurance Act, and so far as I am concerned the terms offered would be perfectly acceptable to me; in fact, my financial position would under the Act

be considerably improved. At present I am the medical officer of two societies, which in the aggregate number 200 members. For my attendance on these I am paid at the rate of 2s. per head per annum, the members paying the chemist for such medicine as I prescribe. I am perfectly satisfied with this remuneration, for although there may be cases of serious illness that necessitate attendances which at 2s. 6d. a visit might in one year swallow the whole 20l. I receive, I consider it is only fair to average up all cases, and on the whole I feel I am as well paid as my clients can afford to pay me, and having plenty of time on my hands I give them my best service, even though they are club patients. Even at Mr. Lloyd George's terms my income from these clubs would be more than doubled, and not only that, I would draw capitation fees from a number of people who rarely need a doctor, or who, when they do need one, never pay him. Many country medical men are in exactly the same position as I am, and we are all certain that the terms offered us would mean better incomes than we earn at present. Notwithstanding all this, I have signed both the B.M.A. pledges and have sent in my resignations of my club appointments to the district secretary, these to take effect at the end of the year. Why? Simply because my trade union, the B.M.A., has called on me to do it. I do not want to be looked on by my fellow-doctors as a blackleg, and hence I have, much against my own judgment, agreed to fall in with the views of those in authority. I am convinced that there are thousands of medical men situated exactly like myself, and, like myself, they do not want to go against their union. I realise now as I never did before the feelings of a man compelled to strike against his judgment, but helpless because the majority take the other view. In my case, however, I question if the majority hate the Act: they have simply blindly followed a set of leaders who, not themselves interested in club practice, have taken it on themselves to pursue a course of action entirely at variance with the best interests of the general practitioner, particularly the man who, like myself, has a mixed middle-class and working-class practice. As to what will happen after the new year, I shall simply tell my club patients that they must now pay as private patients, otherwise I will not attend."

At this stage the doctor's wife, who had been a quiet listener to the conversation, said: "I know what you will do. You will simply attend them as you have always done and sacrifice your health and comfort night and day, and never ask a penny for it—that's what you will do." Whereat the doctor smiled his kindly smile.

The above is an unvarnished account of a conversation with an exceptionally cultured country practitioner, and I had his assurance that the majority of his fellow-doctors in a similar position to himself take exactly the same view. It seems as if the B.M.A. Executive had rushed the situation, and that hundreds, if not thousands, of medical men would have been only too glad to have worked the Act had they got the opportunity of doing so. Perhaps they will get it yet; let us hope so.

Yours truly,

A. S. (40/33.)

The Rise of Drug-stores: Why?

SIR,—At a time when pharmacy is in such an unsettled state, when individual chemists are being outclassed in the eyes of both the trade and the public by stores, when the future looks black for the former and bright for the latter, I think it will not be unreasonable to give expression to my views of the reason; views which have been obtained by daily experience in highest-class pharmacy and now in the store business. At the age of seventeen I left a public school with a much higher certificate than that necessary for the Preliminary examination. I had a relative a chemist, and we all thought that the pharmaceutical profession opened out many advantages and that it was possible for a man with ambition, energy, and determination to get on. I was subsequently apprenticed, registered, and in due course qualified. At the age of twenty-four I had passed through all the best houses in London, had been on the Riviera, and had spent a short time in one of our largest industrial centres. During this time my mind revolted very much against the lack of encouragement (financial and otherwise) meted out to assistants. In the West-End of London especially is it noticeable that the larger businesses are conducted by one man, who pays the assistants in the same methodical way and with much the same feeling as a man would oil his engine. The abilities of the better men are not seen

and are not given a chance to develop under individual management. I spent another two years in the West-End, and at the age of twenty-six I thought seriously of applying to some of the larger firms both through friends known to them personally and also through my own personality. I felt I ought to be earning more money; and that, if I was worth anything to anyone I was worth something, and that something must be fairly reasonable. Well, I applied for a managership—senior or a post as a representative. The head of my own firm granted me a personal interview, was impressed favourably, but failed to see how he could help me. The other firms I wrote to gave me similar replies. These replies sickened and disheartened me, and I wrote to a leading firm of cash chemists. They arranged an interview, were favourably impressed, but they did not leave it at that. They knew that experience and knowledge had to be paid for, and they knew it was to their advantage to pay for it. They offered me a good salary, they took an interest in me, they considered my welfare as well as their own, and I joined them. I now throw all my energy and resource into gaining every possible customer I can for them, which is, of course, a loss to the ordinary chemist in the same town. Thus this shows in one way how the stores are gaining ground, how the chemist is losing it. I am a manager now and looked up to. I also know of many other men from some of the highest-class pharmacies who have had to leave their ideals behind and study their own interests. They are now rising up the ladder and will eventually reach the top, because the rungs of that ladder are strong, and a helping hand is offered from those above. Thus the ordinary chemist is losing all the pith and pick of the trade; the stores pay for genius and ability, and they get it. All the cream of pharmacy is going to them, and do you blame them? When the chemist realises that to pay a man well is to pay himself well, when he realises that meanness coupled with this awful cutting down of wages is cutting down his takings and lowering him in the eyes of budding pharmacists, then will he be justified in crying out, "Why is pharmacy going to the dogs?" It is high time that good-class pharmacists realised the injury they are doing themselves by employing so few qualified men, and those at very poor pay.

Yours truly,

FELIX. (42/34.)

Advertising Ideas.

Mr. G. Forbes Johnston, pharmacist, Broughty Ferry, has furnished us with the following further particulars regarding his Advertiser illustrated and described in the *C. & D.*, September 7, index folio 412:

The matter was printed from a stencil by the aid of a rotary duplicator. The cost is roughly 3l. 10s. per thousand, made up as follows: Covers, 21s. per thousand; envelopes, 12s. per thousand; paper, 30s.; stencils and extras, about 7s. I printed all the articles on paper with a heading. This I consider unnecessary, as the heading on the first page is quite sufficient. I intend to issue it monthly. After my first experience with the duplicating, I do not consider it practical, as it is difficult to duplicate clean copies, and the little extra that printing would cost would be made up in the extra business derived from the additional matter that one would get into the advertiser. I consider that the style of the advertisement is quite good, and will be a means of pulling business. In writing up the articles, I found that the information derived from your books on "Diseases and Remedies" and "Pharmaceutical Formulas" is indispensable. I am often greatly indebted to them. Needless to say, advertising is productive of good business, while at the same time it informs the general public of your existence.

Subscribers' Symposium.

For questions, answers, incidents, and interchange of opinions among "C. & D." readers.

Appreciations.

We fancy it is almost a superfluity to say that we consider the *C. & D.* the only paper worth reading in the pharmacy world, and that view is held by all the chemists we have ever spoken to; but we should like to take this opportunity of thoroughly endorsing it and of again expressing our

warmest thanks for services given so readily and so courteously.—(35/39.)

"A word in praise of your excellent journal. A few weeks ago I asked your opinion as to the composition of a certain sample which I forwarded to you. Your reply was accurate and valuable and earned me nine and sixpence right off the reel! In my younger days I fancied a recipe in one of your *Diaries* and made it a special line, from which I cleared at least five golden guineas per annum."—*Hants* 43/44).

Notices for Chemists' Half-holidays.

A *Somerset Chemist* (41/42) writes: I am informed by the police that my closing-notice is not in accordance with the Act, that the letters must be 2 in. deep. I shall be glad if you will post me two copies as it should be. My present wording is:

SHOP HOURS CLOSING ACT.

In compliance with the above Act, this establishment will be closed on Wednesdays at one P.M. on and after May 1.

Let me know cost of same and I will remit.

[Many are in the same position, we observe, and they will have a visit from the police, who are beginning to be alert as regards the provisions of the Shops Act. It will be remembered that after our correspondence with the Home Secretary (whose regulations prescribe letters 2 in. long), he gave *THE CHEMIST AND DRUGGIST* permission to abbreviate the notice, so that it reads:

THIS SHOP IS CLOSED FOR TO-DAY EXCEPT FOR THE SALE OF MEDICINES & MEDICAL AND SURGICAL APPLIANCES.

This wording, in specially designed letters, is printed on a card measuring 14 by 11 in., and the back of the card bears the principal provisions of the Shops Act. The regulations require one of the notices to be exhibited in the interior and one on the exterior of the shop when medicines and medical and surgical appliances are sold during closing hours, but the Home Secretary informed us that if the "exterior" card is placed inside the shop window against the glass it complies with the regulations. The cards can be obtained from the Publishing Department of the *C. & D.*, 42 Cannon Street, London, E.C., for 8d. the pair, post free.—EDITOR, *C. & D.*]

What is Macassar Oil?

C. K. B. (39/49) asks what should be supplied when "Macassar oil" is asked for? No special name or make indicated.

[From the experience of the writer, Rowland's Macassar oil. Turning up Newbery's list we find "Macassar Oil"—see Rowland.] Postcard expressions of opinion and practice would be useful. "Pharmaceutical Formulas" says:

It is an old fable that the chief component of the preparation [Rowland's] is oil of ben, an oil obtained from the seeds of *Schleichera trijuga*, Willd., by expression or by boiling the bruised seeds in water and skimming off the oil which rises to the surface. This oil was, according to Mr. Robert Glenk, formerly imported into the United States, but latterly what found its way there was composed of coconut oil in which the blossoms of ylang-ylang, *Cananga odorata*, or of the false ylang-ylang, *Michelia Champaca*, had been digested. Now, ordinary oils under the same name, suitably perfumed and frequently coloured red with alkanet, have entirely replaced the natural product. Mr. Glenk received a small sample of the true oil from Mirzapore, and found that at the ordinary temperature it is semi-solid, of a yellowish-white appearance, with a weak odour of bitter almonds. It has a mildly acid taste and an acid reaction to litmus paper. It is completely liquefied at 82° F., and solidifies at about 50° F. The oil has a specific gravity of 0.942.

A formula for preparing a so-called Macassar oil for the hair, which has given great satisfaction to those who have used it, is the following:

Castor oil	...	...	...	3xvj.
Rectified spirit	...	...	...	5iij.
Oil of nutmeg	...	...	...	℥xxx.
Oil of rosemary	...	...	...	℥x.
Oil of sweet marjoram	...	...	...	℥x.
Oil of neroli	...	...	...	℥x.
Otto of rose	...	...	...	℥xxx.
Essence of musk	...	...	...	5j.
Alkanet	...	...	...	sufficient to colour

Mix.

The "Kew Catalogue" states that oil of *Dipteryx oleifera*, Bth., is "said to be used in the composition of Macassar oil."—EDITOR, *C. & D.*

Words in Season.

Three chemists wax fat on the inhabitants of the village where I have spent my holidays, and each represents a distinct

type in the trade. One keeps bees, trains pigeons, grows fruit and roses, and attends to his business when his apprentice (who looks after the shop) goes home to meals. A second—rather elderly—who has worked hard in past days, now takes things easy, gets out a great deal, and lets his wife and daughter attend to the business, except at busy times. A third dresses well and looks well, keeps his shop clean and smart, and attends to business himself, aided by an assistant and an apprentice. Three points are suggested to me by a casual survey of these three businesses. No. 3 seems to be in greatest favour because his shop is clean and he is always there himself, and customers are not kept waiting. I think we cannot exaggerate the importance of personal attention to business. In the matters we deal in customers like to speak direct to the principal, and though we know that it is very trying to listen patiently for fifteen minutes to some old lady elaborating her imaginary symptoms, yet we must accept it as a necessary evil and turn it to profitable account if possible. Further, a nice, bright, clean shop brings people to the pharmacy, and impresses even country customers with the fact that you are up to date. Secondly, in a country place it is a great advantage for chemists to agree among themselves to buy in large quantities on the best terms. If you can only overcome your initial feeling of reluctance to disclose to a neighbour any of your business operations it will pay you very well to work in harmony with him in this way. This applies particularly to patent medicines, where the manufacturers' special-terms quantities can be bought direct and split up among three or four chemists. Thirdly, a word to assistants. If you have been trained for three years in a small country pharmacy don't stop there after completing your apprenticeship if you can help it. Make a move to a larger town, even though it may mean a smaller salary at first. There are times when experience counts for more than salary, and after three years in a country business a town pharmacy would teach you many things. There are two young men in the village of which I speak who would do well to make a move. Generally speaking, it is well to keep moving for a few years after finishing apprenticeship, whether you qualify early or not. You cannot acquire a knowledge of all the various branches of the business unless you do. Experience thus gained is never wasted, and sooner or later your knowledge acquired in rural, city, or suburban business will stand you in good stead.—*Off Duty.*

Legal Queries.

Consult "The Chemists' and Druggists' Diary," 1912, pp. 435 to 454, where most legal difficulties are anticipated, before writing about your difficulty.

Perplexed (Ireland) (42/39).—(1) The total contribution in respect to your apprentice, aged twenty-one and receiving 12s. a week, is 4½d., of which the apprentice pays ½d. and the employer 4d. (2) Since you hold a wine-licence you are not obliged to close your shop on the weekly half-holiday, and you may sell anything, just as licensed grocers do.

Season (37/27).—A retail chemist employs a girl of eighteen as book-keeper and one of fifteen as store-keeper. Neither is ever in the front shop, nor serves customers. The shop is not closed for a half-holiday during four months of the year. How do these girls stand under the Shops Act? [The book-keeper is not a shop-assistant within the meaning of the Act, so that "Season" is not obliged to give her a weekly half-holiday. If the younger girl's duties include the despatching of goods, and this comprises the major part of her work, she must get a half-holiday; otherwise, she is not a shop-assistant, but she comes under Section 2 as being under eighteen years of age, and may not be employed longer than seventy-four hours, including meal-times, in any one week.]

Caryoph (41/2) acts as director and secretary of a private limited company, at a salary of 130l. a year, but his total annual income is considerably in excess of 160l. Is he exempt from insurance under the National Insurance Act, or must the company contribute in respect of him? If contributions are payable, should a card be obtained from an approved society? ["Caryoph's" employment by the company renders him liable to become insured, unless he obtains a certificate of exemption on the ground that he is in receipt of an unearned income of the annual value of 26l. or upwards. If he decides to become insured, he should join an approved society. If, however, he obtains a certificate of exemption, he must produce it to his employers, who are required to contribute 3d. per week in respect of him by affixing insurance-stamps to special cards obtainable at any post-office.]

Phoenix (40/47).—L. for some years acted as dispenser to a doctor, and was in the habit of presenting his accounts annually, the doctor retaining all the pass-books. The doctor has recently died, and his widow is unable to trace pass-books covering a period of one year and five months, or about a thousand prescriptions. She now wishes L. to furnish copies of the prescriptions, but refuses his offer to do so on payment of a small charge, and intimates that she will come upon L.'s premises and copy out the prescriptions herself. Can L. be compelled to furnish the copies, or to hand over the prescription-book, or can an auditor be sent to? [In our opinion (based upon English law), if the original prescriptions were returned to the deceased, the widow cannot compel L. to supply her with copies from his prescription-book, nor is she entitled, without his consent, to make copies herself.]

M. J. D. (33/18) asks the following questions (the Irish town in which he is employed is not a rural district, nor is the shop licensed for retailing intoxicating liquors):

(1) Can I, an apprentice to an M.P.S.I., legally refuse to avail myself of the Shops Act in not taking the weekly half-holiday? [The employer must not employ the apprentice about the business of the shop after 1.30 p.m. on one day per week. The apprentice by staying after that hour is a trespasser on his employer's premises, and contributory to his employer's offence, but the Shops Act does not make the apprentice's disobedience a penal offence.] (2) Does so doing entitle me to any extra annual holidays? [No.] (3) Am I entitled to any annual holidays if I do avail myself of the weekly half-holiday? [No. The provision as to annual holidays is made in the Shops Act only in respect to assistants in shops in Ireland which are licensed for the sale of intoxicating liquors.]

P. C. (35/68).—A, a chemist, has an office of his own and carries out analytical and other work on his own account. He is also in receipt of an income, exceeding 30l. per annum, derived from property. Upon applying for a certificate of exemption from insurance under the National Insurance Act, he was informed that his application was unnecessary, since he is clearly exempt. On the other hand, A is employed by B, a chemist, in his business, at regular intervals, and at a salary. B contends that A, although himself exempt from contribution, should present a card, so that he (B) may stamp it according to law. A disagrees, asserting that, since he is exempt, B is also exempt. Which is correct? [Assuming that the salary he receives from B does not exceed 160l. a year, A, *qua* an employé of B, is liable to become an employed contributor unless he obtains a certificate of exemption. Even if A obtains exemption, B must contribute in respect of him. It is A's duty, therefore, to produce to B either a contribution card or a certificate of exemption, which latter will be granted to A upon his explaining that he is serving under a contract of service, but is in receipt of an income from property exceeding 26l. per annum. Unless A adopts one of these courses he is liable to a fine. Meanwhile B may safeguard himself by obtaining and stamping an emergency card.]

Miscellaneous Inquiries.

We do not as a rule repeat information which has been given in this section during the past twelve months, as it occupies space which can be more profitably utilised for other information. In such cases the numbers are mentioned, and if querists cannot refer to these they may obtain the numbers from the "C. & D." Office at the published prices, usually 6d.

We do not undertake to analyse and report upon proprietary articles, and when samples are sent particulars should be supplied to us as to their origin, what they are, what they are used for and how.

W. C. M. (Toronto) (11/31).—STRAW-HAT CLEANER.—The sample you send is apparently acid phosphate of calcium.

B. B. (25/17).—We know of no work dealing with the manufacture of sauces and pickles in the manner desired.

J. A. C. (33/17).—THE AEROGRAPH FLUID appears to be a spirituous solution of one or more aniline dyes, such as aurine and erythrosin. A few experiments would probably yield the exact information.

D. & P. (33/30).—CLEANING SCARLET CLOTH.—The powder used for this purpose is salt of sorrel (potassium quadroxalate), which is made as follows: Neutralise a given quantity of potassium carbonate with oxalic acid, then add three times the amount of oxalic acid that was required for neutrality. Evaporate and crystallise. For cleaning scarlet cloth ½ oz. is dissolved in a pint of boiling water. See also *C. & D.*, January 13, index folio 70.

C. W. A. (32/58).—METAL-POLISH.—See *C. & D.*, June 1, index folio 826.

J. W. (145/8).—POULTRY-POWDERS.—As a general preventive and method of treatment in liver-disease of poultry, iron and vegetable tonics are employed. In powder form the following is a good combination:

Iron sulphate	...	...	1 oz.
Sodium chloride	...	...	4 oz.
Sodium sulphate	...	...	8 oz.
Powdered extract of gentian	...	...	10 grains

Mix the extract with the sodium chloride, add the other ingredients, and reduce to a coarse powder. One teaspoonful is dissolved in the water for twenty fowls.

A. B. (29/49).—LIME-CREAM.—Mineral oils cannot be saponified, but lime-cream is made from them by mechanical emulsification. A good recipe for an inexpensive product was given in the *C. & D.*, December 2, 1911, index folio 833, and there are many others in "Pharmaceutical Formulas."

Antisept (28/62).—ANTISEPTIC THROAT-PASTILLES:

Menthol	...	...	gr. $\frac{1}{4}$
Eucalyptol	...	...	℥ss.
Glyco-gelatin mass	...	...	3ss.

The *Glyco-gelatin Mass* is made by soaking 5 oz. of gelatin in 6 oz. of water overnight, adding 6 oz. glycerin, dissolving on a water-bath, and evaporating to 15 oz. The dark mass is managed by dissolving some extract of liquorice in the water employed.

A. A. (29/27).—BALLROOM FLOOR-POLISH.—See *C. & D.*, March 30, index folio 496.

Alpha (27/35).—CARBOY COLOURS.—The following are excellent recipes:

Blue.—Copper sulphate $\frac{1}{2}$ oz., solution of ammonia a sufficiency, distilled water 2 gals. Dissolve the copper salt in the water, add ammonia until the precipitate at first formed is redissolved, then the remainder of the water. The density of the colour is varied according to the quantity of water employed. Care should be taken not to make it too dense.

Green.—Solution of ferrous sulphate (5 grains to the oz.) 26 oz. 5 dr. 20m, solution of potassium bichromate (5 grains to 2 oz.) 13 oz. 1 dr. 20m, solution of potassium ferricyanide (5 grains to 2 oz.) 5 dr. 20m, dilute hydrochloric acid 1 oz. 5 dr. 20m, distilled water 1 gal.

Red.—Iodine 3 dr., potassium iodide 3 dr., hydrochloric acid 10 oz., water 2 gals.

We can supply recipes for any other colour if you will state your requirements.

J. G. S. (27/46).—TEETH EXTRACTING AND FILLING.—The article in *The Chemists' and Druggists' Diary*, 1910, p. 455, is suitable for a beginner in dentistry. Other books are Barrett's "Dental Surgery for Medical Practitioners and Students of Medicine" (Lewis, 3s. 6d.); Scwill's "Dental Surgery" (Baillière, 10s. 6d.).

Silent (Bombay) (33/47).—(1) SYNTHETIC PERFUMES.—Information on this subject is given in "Pharmaceutical Formulas," also in the following books: Durville's "Nouveau Guide du Parfumeur" (Desforges, Paris, 5f.); Mann's "Die Moderne Parfumerie" (Ziolkowsky, Augsburg); "Guide to the Employment of Perfumes" (C. Zimmermann & Co.); Gattefossé's "Aide-mémoire et Formulaire Trimestriel" ("La Parfumerie Moderne," Lyons, 1.25f.). (2) "The Perfumery and Essential Oil Record" (Street & Co., Ltd., Serle Street, London, W.C.) deals specially with the essential-oil industry. (3) The method of preparing CHLOROPHYLL is similar to that employed in the manufacture of the green extracts of the Pharmacopœia. The juice pressed from grass or spinach is generally used, this being heated gradually to 130° F. to separate the chlorophyll.

Manchester (35/58).—THE ASSISTANTS' CERTIFICATE FOR DISPENSING granted by the Society of Apothecaries is recognised by many public hospitals in London and elsewhere in England for appointments on the dispensing staffs, but practically all the leading hospitals require their dispensers to be registered under the Pharmacy Act, 1868. In most of the smaller hospitals in England, especially those who employ women as dispensers, the Apothecaries' Society's certificate is regarded as quite sufficient, also for Poor-law appointments. The demand for women dispensers with this certificate is very much less than the supply.

W. G. (22/30).—BOOK ON FOOT-ROT IN SHEEP.—The only special work on this subject with which we are acquainted is a twenty-four-page pamphlet by Sir George Brown, "Contagious Foot-rot in Sheep" (Murray, 1s.). Your customer should also obtain Leaflet No. 154 of the Board of Agriculture and Fisheries, which deals with foot-rot in sheep. The

following works also refer to the subject: Steel's "Diseases of Sheep" (Longmans, 12s.); Armatage's "Sheep Doctor" (Warne, 10s. 6d.); Rushworth's "Sheep and Their Diseases" (Baillière, 6s.).

J. B. Co. (25/49).—RUBBER-TREE FUNGUS.—The *Corticium salamonicum* fungus is treated by spraying or otherwise liberally applying Bordeaux mixture. Some insist upon the diseased part of the tree being cut off and the wound treated with the same mixture or tar. Formulæ for Bordeaux mixture were given in *The Chemists' and Druggists' Diary*, 1910.

Assistant (27/33).—CLOTH BALLS have as a basis magnesium carbonate or a mixture of that substance with starch and chalk. This is compressed into blocks, a binding material, such as weak mucilage of tragacanth, being generally employed. Some varieties contain quillaia extract.

Oamul (35/18).—FLOUR-IMPROVER.—The sample you send consists of calcium-acid phosphate with the addition of a substance like dextrin or powdered malt. It is not illegal to employ such substances in improving bread, but objection is taken to the use of a calcium phosphate containing calcium sulphate. (See *C. & D.*, April 15, 1911, index folio 545.)

G. P. (37/45).—HAIR-DRESSING.—We presume that what you mean by a "non-greasy hair-oil" is a greaseless brilliantine, made from glycerin with its own volume or twice its volume of spirit, suitably perfumed. Sometimes glucose syrup with proof spirit (equal proportions) is used, but is disagreeably sticky.

H. A. W. (36/58).—RESTORING FADED INK.—The ink used in old documents was made with galls and iron sulphate, and the colour that remains is due to iron oxide. You cannot "restore" this in the common sense of the term, but you may darken it temporarily by steaming the surface cautiously, then holding the writing over a plate or saucer in which you have poured a little solution of ammonium sulphide, so that the vapour may darken the iron residue. The solution which you refer to is a weak solution of ammonia and ammonium sulphide.

Quercus (32/59) tells us of a horse which was treated for ANGLEBERRY with white arsenic and honey. The root came out completely, leaving a deep open sore, rather larger than a crown. What should be the treatment, and is the hair likely to grown on again? [Dress the wound with the following lotion:

Plumbi acetatis	...	...	5j.
Spt. methylat.	...	...	3j.
Aquæ	...	...	5xi.—M. et S.

When nearly healed, and the scab beginning to fall off, dress with the following ointment:

Ung. hydrarg. fort.	...	...	3j.
Adipis lanæ hydros.	...	...	3j.—M.

If the hair-follicles are not destroyed the following may be applied a week or two after the part is healed:

Tr. cantharidis	...	...	5ss.
Ol. ricini	...	...	5iss.—M.

In some cases a cantharidis-plaster has a wonderful effect.]

A. T. (42/19).—It is difficult for us to advise you properly with regard to dissolving OIL OF ANISE in COUGH-MIXTURE, because you do not give the quantities of the ingredients. The oil of anise is surely in very excessive quantity if it separates as you say. We would suggest that you should dissolve all the essential oils in spirit, mix gradually with the glycerin and ipcacuanha-wine (previously mixed together), then after mixing the extracts with the oxymel, add the solution of the oils to it, stirring constantly all the time.

Retrospect of Fifty Years Ago.

Reprinted from "The Chemist and Druggist," Sept. 15, 1862.

The New Pharmacopœia.

In consequence of some difficulties having arisen with respect to the publication of the new Pharmacopœia, a Bill has been brought in by the Lord President, providing, in the first place, that the General Council of Medical Education and Registration shall be deemed to be, and to have been, from the date of its first establishment, a corporate body, with capacity to hold lands for the purposes of the Medical Act; and in the second place, it directs that the British Pharmacopœia, when published, shall for all purposes be substituted for the existing Pharmacopœias, and that any Act of Parliament, Order in Council, or custom relating to any of these, shall be deemed, after the publication of the British Pharmacopœia, to refer to it.

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EACH IN BOXWOOD CASE.

PEOPLE BUY 3 & 6 TABLETS AT A TIME
AND PROFIT IS EXCELLENT.

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The word "NEPENTHE" is registered under the Trade Marks Act, and is the exclusive property of Ferris & Company, Ltd. We have from time to time been compelled to obtain injunctions in the Courts by which Defendants were perpetually restrained from dispensing, selling, or supplying under the name of "NEPENTHE," or any colourable imitation thereof any medical preparation not prepared by us, and from in any manner infringing our Trade Mark "NEPENTHE" (No. 464), and were ordered to pay the costs of the actions.

The Trade are respectfully warned against any infringement of our Trade Mark "NEPENTHE," or the use of any name so nearly resembling it as to be calculated to deceive, and also against dispensing any but "Ferris & Co.'s" preparation when "NEPENTHE" is ordered in a prescription.

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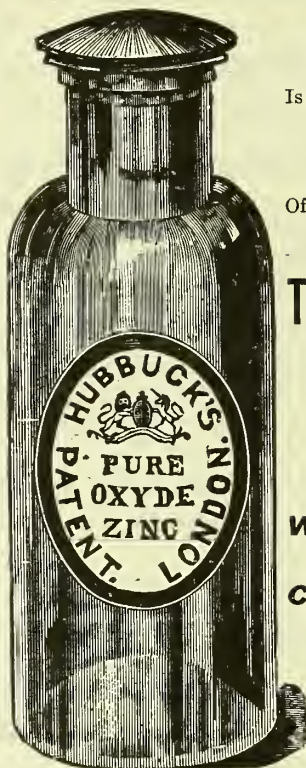
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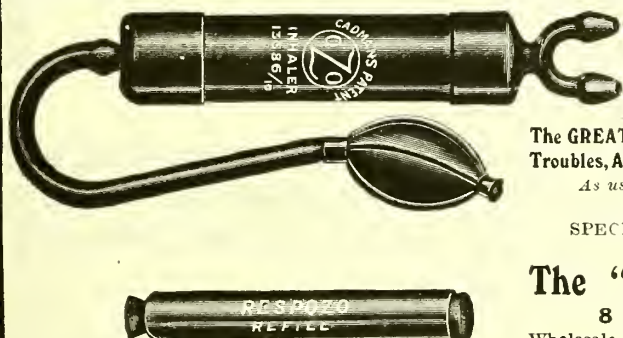
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Pharmaceutical Journal, October 22, 1904.

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Pepsin, B.P., 10 lbs. @ 9/4 lb.; 1 lb. @ 10/- lb.
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Potas. Bicarb. pulv., 1 cwt. @ 32/6 cwt.; 7 lbs. @ 4d. lb.
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Potass. Cyanidum, 98%, 1 cwt. @ 11½d. lb.; 7 lbs. @ 1/2 lb.
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Potass. Metabisulph., 1 cwt. @ 35/6 cwt.; 7 lbs. @ 6d. lb.
Potass. Permang., Cryst., 1 cwt. @ 39/- cwt.; 7 lbs. @ 5d. lb.; large cryst., 7 lbs. @ 6d. lb.
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Pulv. Glycyrrh. Co. B.P. (Green), English Ground, 56 lbs. @ 35/- cwt.
Pulv. Ipecac. Comp. P.B., 1 lb. @ 4/- lb., Jalap Comp. P.B., 1 lb. @ 1/6 lb.
" Rhei Comp. P.B., 1 lb. @ 1/2 lb.

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*Tinct. Valerianæ, 5 lbs. @ 2/8 lb.; bond, 6d. lb.
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Treadle (Black), Casks about 5½ gross @ 42/- per Cask; 24 lbs. @ 2d. lb.
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Ung. Acid. Boric, P.B., 28 lbs. @ 6d. lb.; Flav. 28 lbs. @ 4½d. lb.
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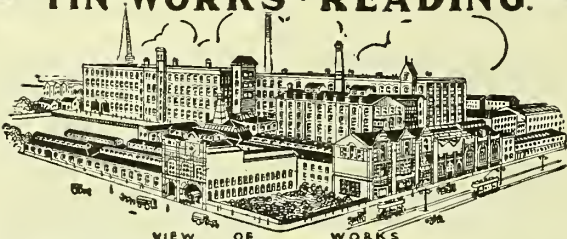
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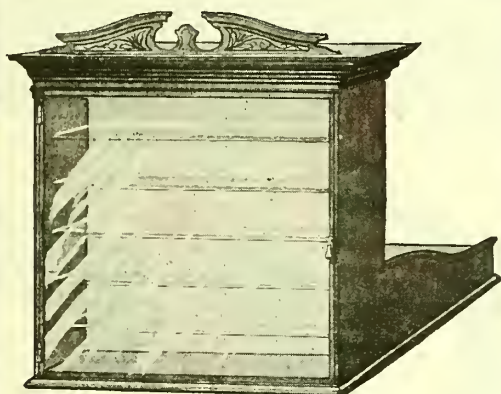
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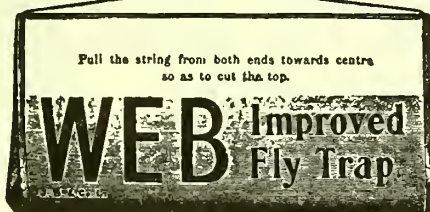
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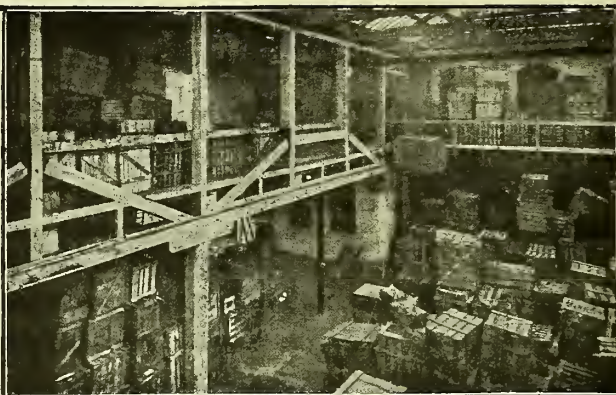
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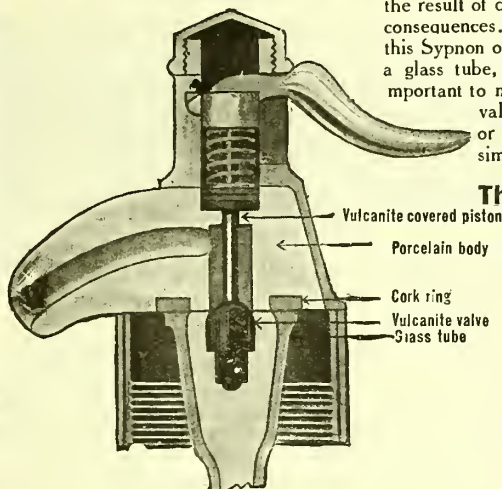
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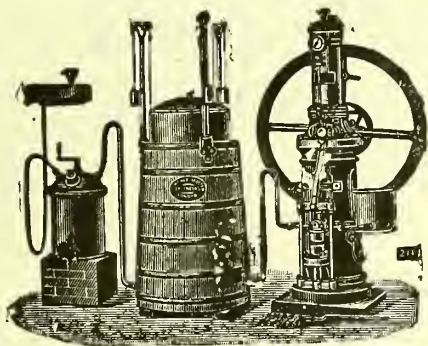
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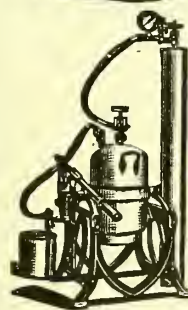
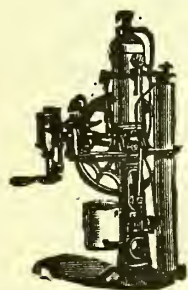
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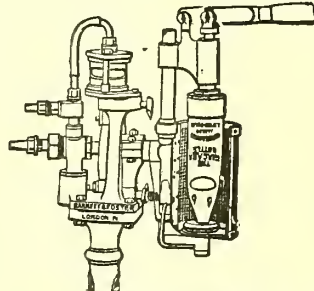
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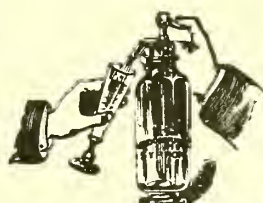
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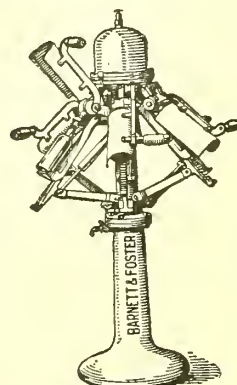
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THE CHEMIST & DRUGGIST SUPPLEMENT.

OFFICE: 42 CANNON STREET, E.C. SATURDAY, SEPTEMBER 14, 1912

A Copy of this Supplement is inserted in every Number issued of "The Chemist and Druggist."

TO ADVERTISERS IN THIS SUPPLEMENT.

The Publisher desires to make it clear that advertisements of Businesses for Disposal and Wanted, Situations Open and Wanted, Exchange Column, &c., **MUST BE PREPAID** (except in the case of serial advertisers) and to ensure prompt insertion **REMITTANCES MUST ACCOMPANY INSTRUCTIONS.**

Advertisements for the current issue cannot be received after 4 p.m. on Thursday in each week. If it is necessary to telephone or telegraph an urgent announcement this may be done

PROVIDED the MONEY is TELEGRAPHED

at the same time and the fact made clear that the money order is to be delivered at 42 CANNON STREET, LONDON, E.C. Advertisers will assist greatly in the preparation and quick despatch of the Supplement by making careful note of these rules. Telephone: No. 852 Bank (two lines). Telegraphic Address: "Chemicus Cannon London." (Three words counted as two.)

It pays to pay for advertising
in this Supplement.

CHEMISTS' TRANSFERS.

Messrs. ORRIDGE & CO., 56 Ludgate Hill, E.C.

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

1.—MIDDLESEX (Few Miles Out).—Death vacancy; good-class Dispensing and Family Trade; returns £750; *net profit* £300; attractive, well-fitted shop, fully stocked; comfortable residence, with garden attached; rent £45; price £600.

2.—WEST END.—Dispensing and Retail Business; returns between £950 and £1,000 per annum; *gross profits exceeds* £500; large house, corner position; price £800; Vendor retiring.

3.—LONDON, S.W.—Good class Retail and Dispensing Business; returns between £1,000 and £1,100 per annum; *net profit* £570; capital opening for Store trading; handsomely fitted shop, fully stocked; price about £850.

4.—WEST OF LONDON (within easy distance of Town).—Established Business, capable of extension, situate in good position; the shop offers a splendid nucleus; the returns at present are over £1,000; price about £650.

5.—KENT (Suburban).—Dispensing and Retail Business; returns last year £2,300, increasing; intending investors with £1,200 at command will find this a sound investment.

6.—BANKS OF THE UPPER THAMES.—Old-established good class Pharmacy, situate in busy main thoroughfare; returns £1,600 per annum; *net profit* £300 (proof given); the business admits of extension; price £675.

7.—LONDON, W. (Death Vacancy).—Modern Pharmacy; returns, including branch, average £4,366 per annum; *net profits*, after paying Managers' salaries, £516; attractive shops, positions unique; terms, valuation, and goodwill to be arranged equitably.

8.—HERTS.—Good-class Business, established many years; returns average about £940 per annum and the *net profit* £246; Vendor's own property; lease will be granted; price £750 and book debts.

9.—WEST OF ENGLAND.—Good-class Dispensing Business; established by Vendor 45 years since, now retiring; returns about £950 per annum at good prices; Vendor's own property, new lease if desired; trial allowed; price about £800; worth attention.

10.—YORKS (Market Town).—Mixed Business; position unique; returns £940, yearly increase; terms, fixtures and fittings £100; stock at valuation.

11.—SOUTH COAST.—Dispensing and Retail Business; present returns between £1,400 and £1,500 per annum; well-appointed shop; price £900.

12.—SURREY (Few Miles Out).—General Retail, including an excellent Veterinary connection; returns about £1,200 at fair prices; Vendor being desirous of going abroad will accept £100 and valuation of stock and fixtures.

13.—HOME COUNTY.—Unopposed Business; returns show a yearly increase, present rate £500 per annum; double-fronted shop; comfortable residence; garden; rent £30 yearly; price £220 or valuation of stock and fixtures; part payment entertained.

14.—NORTH OF ENGLAND.—Good-class Prescribing Business; returns exceed £500 per annum; *net profit* £150 (about); good house and garden; rent £30; held on lease; price £275.

Particulars of any of the above will be furnished on application.

N.B. NO CHARGE TO PURCHASERS.

VALUATIONS FOR STOCKTAKING.

Messrs. O. & Co. desire to emphasize the necessity of a Periodical Statement of Account, by which means alone **Profit, the value of Business, &c.**, can be determined. Involving as this does the labour of Stocktaking and Valuation, it is often omitted, and eventually becomes the cause of **confusion and loss.**

Messrs. O. & Co. are prepared to undertake these essential duties, and will make **Special Terms** for such services.

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AGENCY.—We have always a large number of *Buyers* on our books, and we can frequently find a purchaser at once. We also have a *Private Register* for vendors who are in no hurry to sell, and who do not wish their businesses to be advertised.

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- 3.—LONDON, N.—Returns £1,000; net profit £250; price £450.
- 4.—HANLEY.—Returns £600; net profit £200; price £350.
- 5.—BIRMINGHAM.—Returns £500; net profit £150; price £250.
- 6.—HARROGATE.—Returns £760; net profit £275; price £600.
- 7.—KENT.—Returns £1,400; net profit £315; valuation £750.
- 8.—SOUTH WALES.—Unopposed Light Retail; returns over £800; net profit £230; rent £30; price £450.
- 9.—SHREWSBURY (near).—Light Country Retail, Dispensing, etc.; returns £1,400; rent £40; price £750.
- 10.—DURHAM.—Returns £855; net profit £220; price £550.
- 11.—SOUTH Lincs.—Returns £550; net profit £190; price £400.
- 12.—FULHAM.—Returns £675; price £200, or offer.
- 13.—MIDLAND SPA.—Very Select Dispensing Business; returns £1,500; net profit £500; splendid house and shop.
- 14.—LONDON, S.E.—Returns £950; net profit £260; price £650.
- 15.—BLACKBURN.—Returns £750; net profit £225; valuation £400.
- 16.—ENGLAND.—Hundreds of Businesses; prices £50 to £4,500.

LONDON CHEMISTS

are invited to write for an interview with us in London, free of any charge whatever, between September 24 and September 28, upon any matter of Sale, Purchase, or Valuation.

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Vendors invited to send particulars, in confidence.

Purchasers stating requirements can have selection from Register of Businesses of all classes, sizes, or places from £50 to £2,000.

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	Returns	Rent	Price
Wimbledon, New ...	£450	£35	£300
Thames Valley ...	£80	55	300
Kent ...	500	30	220
Twenty miles out ...	1,300	70	500
Near Crystal Palace ...	300	45	120
Ten miles out ...	700	50	400
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Chemists' Valuers and Expert Stocktakers.

Businesses transferred privately.

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We desire particularly to draw the attention of Colonial and Foreign Subscribers to the fact that in cases where they require partners, agents or assistants, or wish to sell their businesses, an advertisement in this Supplement, placed in every copy of "The Chemist and Druggist," should be the readiest means of helping them to attain their object. The tariff for such announcements is given under the appropriate headings in the Supplement. Instructions and remittances can be sent to us direct or through the advertisers' correspondents in this country.

MESSRS. BERDOE & FISH,

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- 3.—DEVON. — Light Retail and Dispensing Business, in good Market town; returns £700, increasing; net profit £190 to £200; excellent house and shop; very heavy stock; handsome front; price £600; worth attention.
- 4.—DORSET.—Light Retail and Prescribing, with own Specialities and Dentistry; returns £670; net profit £284; low rent, on lease; good house; best position; fully stocked; price £550.
- 5.—WILTSHIRE. — Old-established Light Retail, with Wines and Spirits; in same hands many years; returns about £900; plenty of scope; well-stocked shop; good house; price £600.
- 6.—SURREY.—Good-class unopposed Retail and Dispensing Business; returning about £650; net profit £200; convenient house; well fitted and stocked; price £550.
- 7.—Lincs. — Unopposed General, Country Retail, under manager; returns £450; scope for much increase; low rent; shop recently refitted and restocked; price £275, or valuation.
- 8.—NORTH-EAST COAST.—Neglected Cash Retail and Prescribing Business; returns £820; was doing £1,150 and can again; fine shop in splendid position; price valuation, about £500.
- 9.—KENSINGTON.—Light Retail, Dispensing, and Prescribing; returns £1,100; net profit £300; plenty of scope; fine corner position; well fitted and stocked; same hands many years; price £800.
- 10.—LONDON, W. (15 miles out).—Good-class Business, practically unopposed; death sole cause of selling; net profit about £500; attractive shop; good stock; price £600.
- 11.—YORKS (Inland Health Resort).—First-class Retail and Dispensing; returns £1,500; good profits; splendid position; elegantly fitted and fully stocked; price £1,150; worth attention.
- 12.—EASTERN COUNTY.—Sound unopposed Village Business; no Oils or Paints; returns £750; net profit £300; low rent; nice house and large garden; price £625.
- 13.—GLAMORGANSHIRE.—Unopposed Light Retail, in rapidly growing district; returns £828; plenty of scope; net profit about £250; own property; selling through failing health; price £350; stock and fixtures worth £450.
- 14.—KENT (Distant Suburb).—Light Retail and Prescribing Business, increasing; returns about £750; no side-lines; net profit 33½ per cent.; large shop; very good house and nice fruit garden; price £550.
- 15.—CHESHIRE. — Unopposed good-class Business in rapidly growing district; returns £565; net profit £200; good house and garden; price £335; strongly recommended.
- 16.—MANCHESTER.—Neglected Suburban Business; returns £500 under management; plenty of scope; corner position; main road; low rent; 700 to 800 customers weekly; price £200.
- 17.—HAMPSHIRE.—Light General Retail Business, well situated in good market town; present returns £8 weekly; can be much increased; low rent; good premises; price only £135.
- 18.—CAMBS.—Profitable Cash Business; returning £5 a week under unqualified; good chance for smart qualified man; rent under £20; must sell through illness; price £85, or valuation.
- 19.—LONDON, S.E.—Good-class Retail Business; no side-lines; returns £950; net profit £258; books properly kept; well fitted and stocked; price £650, or valuation terms arranged.
- 20.—LONDON, N.E.—Very profitable Cash Retail; returns about £700 under manager; plenty of scope; excellent main-road position; good house; price £325; worth seeing.

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LETTERS in reply to Advertisements may be addressed to this Office, and will be forwarded to the Advertiser for an additional charge of 6d.

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ACCRINGTON.—For Sale, clean, profitable Business; splendidly fitted shop; only wants seeing; price £230, or nearest offer; part can remain; reason for disposal, developing Wholesale. Write, Heaton, Chemist, Accrington.

BIRMINGHAM.—Aston (best part); price £100, worth considerably more, with good clean fresh stock; shop nicely fitted; would suit an enterprising man; Photography, Optics, and Dentistry could be added; good house, with every modern convenience; rent low; reasonable offer entertained; well worth interviewing. 160/24, Office of this Paper.

C.O. DURHAM.—Unopposed Country Business; returns about £700; good opening for Optics; rent £23; price £250, or valuation. Apply, H. H. Smith, c/o Hirst, Brooke & Hirst, Ltd., Leeds.

ELLON, Aberdeenshire.—For Sale, by private bargain, the old-established Business of Chemist and Druggist, Ironmonger, Stationer, and Dealer in Wines and Spirits, belonging to Mr. James Walker, The Square, Ellon, who has acquired another business. For particulars apply to Mr. Walker, or to A. J. Raeburn, Solicitor, Ellon, with whom offers should be lodged by September 28.

LANCASHIRE.—Old-established Retail Chemist's and Druggist's Business, pleasantly situated and in growing neighbourhood; present tenant retiring after 40 years; Gilbey and other Agencies; splendid opportunity for pushing young man. Apply 158/38, Office of this Paper.

LANCASHIRE.—For immediate Disposal, a good-class Chemist's Retail Business; established 25 years; returns £600; good house attached; will sell at valuation, about £200; satisfactory reasons for disposal. Apply, J. Sidebottom & Co., Littleborough.

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LONDON, East (main road).—Cash Business, with good Dental Practice; established 24 years; under unqualified man shop takings £550, has done more; Dental takings £250; owner in business near and will give all advice afterwards to a purchaser; shop fully stocked and handsomely fitted; a bargain for £350; every house accommodation; low rent, etc. Particulars, Elliott (156/22), Office of this Paper.

LONDON (good-class Suburb).—A Dispensing and Light Retail Business; same hands many years; retiring; returns between £1,400 and £1,500; net profit nearly £550; low rent; long lease; good house; price £1,150. Cash buyers only need apply to "Xaxa" (163/11), Office of this Paper.

LONDON, S.W.—Well stocked and fitted Pharmacy; electric light; modern house, bathroom, etc.; main road; excellent opportunity to develop Fancy Goods trade, etc.; returns under Junior £650; rent £60; can let off; personal qualified attention only wanted; well situated for Insurance Dispensing; price £300. Apply, 163/20, Office of this Paper.

MIDLANDS. For immediate Disposal, the Business and Premises of an old-established firm of Chemists and Druggists; returns about £500; population 7,000; no qualified opposition; excellent opportunity for a pushing qualified man; stock and fixtures at valuation, about £200; every investigation allowed; particulars of premises at interview; owner going abroad. 161/9, Office of this Paper.

MIDDLESEX (death vacancy).—Good-class Family Retail and Dispensing about 14 miles from London; shows net profit of £300; main road position; nice house; old-established; rent £45; selling solely through death of proprietor; price £600, or best offer. Write "Widow" (45/62), Office of this Paper.

NORTH OF ENGLAND.—Country market town; with Wine and Spirit Licence; nice shop and house, with garden; established over 50 years; returns £1,000 yearly, at good profits; owner of premises; price with house, etc., £1,750; without house £500, stock, goodwill, and fixtures cash purchaser; owner going abroad. 160/11, Office of this Paper.

NOTTINGHAMSHIRE.—Old-established Wholesale and Retail Business for Sale, situated in the Market Place of a growing Colliery town; population over 20,000; average sales for past 3 years £2,500; shop beautifully fitted up; excellent Storerooms and yard; death of proprietor reason for sale. Price and particulars of Henry Bradfield & Sons, 21 Victoria Street, Nottingham.

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PORT DINORWIC.—Population 2,500; a good Family Retail Business, unopposed; the only Chemist in town; lock-up shop; low rent; good scope for Insurance Dispensing; good fixtures. Apply, Jones, Medical Hall.

SOUTH COAST.—Select Dispensing and Family Retail Business, in splendid position; about 2,700 new prescriptions last year; good opening for Photographic and Optics; returns £1,350, yielding a clear net profit of nearly £450; excellent stock; low rental; good house; price £1,150. Apply, 153/1C1, Office of this Paper.

SOUTH-WEST OF ENGLAND.—A thorough sound Business for sale in most delightful locality; turnover about £1,500; increasing; excellent profits; very good house and shop fully stocked; price required £1,100; references required. Address, "S. W. E." (163/100), Office of this Paper.

SURREY (near Richmond).—Profitable middle-class Cash Business; returning £450, and capable of considerable increase; selling solely through lack of capital; large residential district; slight opposition; attractive, well-fitted shop, main-road position; nice house; price for quick sale £250. Apply "Immediate" (163/011), Office of this Paper.

THAMES VALLEY.—Thoroughly sound and profitable little Business, pleasantly situated and unopposed; returns about £10 a week; well stocked and fitted; long lease at very low rental; plenty of scope for energetic man; price £300 or offer; in present hands 9 years. Apply 160/1, Office of this Paper.

YORKSHIRE.—Country Business, with Wine Licence, 8 miles from Leeds; small turnover, but could be increased; no qualified man in the district; well fit up shop and comfortable house; rent £10; ill-health cause of sale; price £100. Apply, H. H. Smith, c/o Hirst, Brooke & Hirst, Ltd., Leeds.

A SMALL Chemist's Business for immediate Disposal in very good neighbourhood just off Oxford Street, W.; a good little concern; price £300, or offer; half of the purchase money could be paid by instalments. Apply, by letter only, to Taylor, 151 Oxford Street, W.

CHEMIST, who wishes to devote who'e time to another Branch of his business, is desirous of Disposing the Retail part of his business, recently re-fitted; old-established; nearest opposition about half-a-mile; in industrial district; main thoroughfare; good premises; low rent; a bargain to a smart up-to-date young man; offers invited. Apply, "Cymro," Brynawel, The Parade, Whitechurch, Cardiff.

CHEMIST'S and Druggist's Business for Disposal; well fitted shop in good position country town; good district; doing £700 per annum; price for freehold premises, fixtures, fittings, utensils, and stock £700. Full particulars of Ernest S. Beard & Daniel, Valuers, Colchester.

EXCEPTIONAL Opportunity (Death of Owner).—Small Retail; over half profit; few patents; no opposition; large amount of prescribing; neglected through ill-health; rent £25, on lease; good house, newly decorated; nice garden; price £130; established 40 years; last owner 10 years; no reasonable offer refused. F. H., 100c Queen Victoria Street.

FOR immediate Disposal, small Business in thriving country town, situated main street; double-fronted shop, with house attached; fixtures and fittings new; turnover £500, with good scope for increase; rent low (£28 and rates); satisfactory reasons for disposal and no reasonable offer refused. Dyson, Alfreton, Derbyshire.

FOR immediate Sale, owing to ill-health, vendor ordered abroad, an old-established well-fitted Pharmacy in Western Suburb of London, returning nearly £800, with good house and small garden on lease at £55; young business man can very largely increase; first reasonable offer, say, £300, will be accepted. Baker, 36 Woodstock Avenue, Golder's Green, N.W.

FOR immediate Disposal, owing to ill-health, a Business which produces AN ANNUAL GROSS PROFIT OF OVER £600; a rare opportunity for one or two qualified men having capital. Send for full particulars, "Lancashire" (161/32), Office of this Paper.

GREAT Sacrifice.—Solid Mahogany-fitted Pharmacy, doing nearly £450, to be Disposed of immediately; good, clean stock; easy rental; long lease if desired; must be sold, and will meet price nearest £150; fittings cost this; good living assured; illness sole reason; offer cannot be beaten anywhere. Apply, 160/33, Office of this Paper.

GOOD Business for Sale in a suburb of a Midland town; good middle-class trade; returns £560 under unqualified management; qualified man would increase; good opening for Dentistry; no opposition; price £400. 155/23, Office of this Paper.

NEW QUAY, CARD.—For immediate Disposal; any reasonable price; large house and garden; rent, rates, and taxes £25; wine-licence a monopoly; suit qualified or unqualified; must sell, cannot give attention; chance of a lifetime, especially to one with knowledge of Optics or Dentistry. Gwilym Evans, The City Road Pharmacy, Cardiff.

SMALL Business for Sale, N.W. Suburb, 10 miles out; neighbourhood increasing; nearest opposition half mile; excellent opening for Dentistry and Optics; proprietor has had appointment offered and wishes to dispose at once; references will be given and required; good opening for one starting in business. "Rhei" (158/2), Office of this Paper.

TO be Sold, as a going concern, the old-established Business of a Chemist (1875) situated in a splendid residential district, Devonshire Park, Higher Tramere, Birkenhead. Apply, Robert Pelling, F.A.I., 54 Hamilton Square, Birkenhead.

£100 (part down, remainder by arrangement) buys Drug Stores; 10 minutes S.E. London Bridge; returns (1911) £535 (patents £50); rent, including taxes, £54; handsomely fitted, well stocked; now under unqualified management; no poisons having been sold returns could be greatly increased by qualified management. 153/8, Office of this Paper.

£120, or nearest offer, immediately purchases very profitable Prescribing Business, London suburb; main road, unopposed; established 80 years; only changed hands twice; doing £5 to £5 10s. average weekly; gross profits average £3 15s.; net £2 15s.; suit unqualified; rent only £50 p.a.; affliction necessitates immediate disposal (under Specialist's orders); a genuine business and a sure living; first offer nearest above secures it. Write 160/13, Office of this Paper.

£200.—Splendid Business for Sale; only wants looking at; takings £12 weekly. Apply, "S," c/o Mitchell's, Wholesale Chemist, Grays, Essex.

FOR SALE.

HANDSOME Mahogany and Plate-glass Shop Front, 12 ft. long by 11 ft. high; Mahogany and Plate-glass Shop Door, Fanlight and Frame. 2 Plate-glass Mirrors; very handsome Window-enclosure and Plate-glass Shelves, Cupboards under; solid Mahogany and Plate-glass Mirror doors. 4 Plate-glass Mirrors; excellent condition and modern design; now fixed in a Dublin Pharmacy; £50 complete; cost £150; can be adapted to any size; also 2 by 4 gall. Swan-necked Carboys and Stands. 160/17, Office of this Paper.

APPRENTICESHIPS.

WANTED, an Apprentice; high-class Dispensing business, also Dentistry, Optics, and Photography. Apply, F. D. Spencer, The Pharmacy, Stratford-on-Avon.

YOUTH (17), tall, good address, Preliminary, 8 months' experience, wishes to complete Apprenticeship; indoors; good references. McFall, Chauntry Road, Alford, Lincs.

YOUTH (20), with 3 years' Retail experience, desires Apprenticeship; indoors; Birmingham or district preferred; must have plenty of time for study. Particulars to "Gelsen" (158/37), Office of this Paper.

SALES BY AUCTION.

In the High Court of Justice, Chancery Division. Mr. Justice Warrington, 1909 L. No. 724. *Re the Liquid Air Power, etc., Co., Ltd. Uridge v. The Company.* Messrs.

FULLER, HORSEY, SONS & CASSELL will **SELL BY AUCTION**, at the Liquid Air Co.'s Wharf, Church Road, Battersea, S.W., on **TUESDAY, SEPTEMBER 24**, at 11 o'clock precisely (unless previously disposed of as a whole), as a first lot, certain

LETTERS PATENT

for improvements in the treatment of Liquid Air and the Manufacture of Nitric and other Acids, and immediately afterwards, in lots in detail, the

LIQUID-AIR PRODUCING PLANT,

having a capacity of 20 gals. per hour, comprising a 250 h.p. Ingersoll-Sergeant 3-stage Air Compressor for compressing up to 2,500 lb. per square inch; Worthington Independent Surface Condensing Set; 300 h.p. Babcock-Wilcox Boiler, with Feed Pump, Heater, Water Tanks, Piping, etc.; Knudsen's Patent Liquefier, Nitric-acid Plant, with 4 Cylinder Compressor, 3 Gas Equalisers, 4 Gas Holders, Hydrogen Separator; 32 h.p. Stockport Gas-engine and various other accessories.

The plant may be viewed by orders to be obtained of the Auctioneers, and catalogues with conditions of sale had of the Receiver, H. Gouldie Wilson, Esq., 28 Basinghall Street, E.C.; Messrs. Bullock & Co., 65 London Wall, E.C.; J. J. Hands, Esq., Solicitor, 119 London Wall, E.C.; or of Messrs. Fuller, Horsey, Sons & Cassell, 11 Billiter Square, London, E.C., and 100 King Street, Manchester.

SALES BY TENDER.

TO be Sold by Tender, Fixtures and Fittings of first-class Chemist's Business at 146 Edgware Road; can be viewed any time. Tenders to be sent to H. Rous, 220 Edgware Road.

TO LET.

FULHAM (main road)—Chemist's and Druggist's, fine position, to Let; low rent, on lease, double-fronted shop; fine dwelling-house; could be let off as flats; fittings and fixtures, stock, etc., low price; view by appointment. Apply Richardson & Sons, Builders, 73 Avondale Road, Peckham.

HORSHAM.—To be Let, in an excellent position, a capital Shop with Dwelling-house; possession September 29; good opening for Chemist. Apply, John Churchman & Sons, Estate Agents, Horsham.

TO Let, to Chemist and Druggist only, from September 29 next, the House, Shops, Premises, Land and Stables now in occupation of W. S. Greaves, Ltd., Wholesale and Retail Chemists and Druggists, Ironville, Alfreton; good business and monopoly guaranteed to energetic man. Apply to the Butterley Co., Ltd., near Derby.

PARTNERSHIPS.

MINOR, possessing good amount of capital, wishes meet another qualified with equal sum, view undertaking good-sized concern; unqualified desiring to pass entertained; unmarried and abstainer preferred. Address, giving some idea of capital, class of business experienced in, etc., to "Co-operation" (163/19), Office of this Paper.

PHARMACIST and Optician (F.S.M.C.), with a small capital, desires a Partnership in a good-class business; the management of a branch business with view to succession would be entertained. Apply "Metol" (162/18), Office of this Paper.

PHARMACIST, with expert knowledge of home and foreign Dispensing, Languages, Photography, etc., is open to purchase Partnership in good-class business; or he would join another man in opening or purchasing a high-class Pharmacy on equal terms. "International" (160/31), Office of this Paper.

WANTED, a Working Partner to take charge of a small profitable Chemist's Business situated off Oxford Street; half share £150. Apply, by letter only, Taylor, 151 Oxford Street, W.

BUSINESSES WANTED.

LIGHT Retail wanted, on the South-West or Southern Coast of England preferred; Brighton, Portsmouth, Christchurch, Weymouth, Dawlish, Torquay, Plymouth, or Falmouth if possible; returns about £1,400 to £2,000, but smaller business not objected to if in good position; will pay up to £500 for goodwill for the right business; strict confidence guaranteed; references given before investigation. 45/200, Office of this Paper.

AGENCIES.

ALGIERES.—French firm of Commission Agents, with best possible connections in the Drug and Chemical trades in the whole of Algeria, would undertake the Representation of first-class English firms for Sundries and Specialities; English correspondence. Joannes Collin, 15 rue d'Isly, Algiers.

AMERICA.—Advertiser, leaving the 25th inst., is open for one more Agency, Surgical or Druggists' Goods; commission basis. Storian J. Hyam, 119/125 Finsbury Pavement, E.C.

COLONIAL.—Local Agents wanted in Fever districts for a proved Malaria Specific; liberal margin of profit in handling. Buying agents please apply 146/4, Office of this Paper.

MANUFACTURERS wishing to appoint an Agent in London should communicate with Robinson, Kelman & Co., 79 Mark Lane, London, E.C.

TRAVELLER, residing in Johannesburg, calling on Chemists, Hospitals, and Government Institutions throughout South Africa, would like to take up special lines that would not clash on a commission basis and part expenses. Apply, "C. B." (156/28), Office of this Paper.

SITUATIONS OPEN.

3s. 6d. for 50 words or less; 6d. for every 10 words or less beyond, prepaid.

NOTE.—Replies can be addressed to this Office and forwarded to the Advertiser for an Additional charge of 6d.

TO SAVE TROUBLE.

MANY correspondents answering advertisements in this Supplement enclose remittances to cover the cost of forwarding their letters to advertisers who prefer to be addressed o/o this Office. The Publisher desires to make it clear that this is quite superfluous, and perhaps this reminder will obviate the necessity of the frequent return by him of such remittances.

ANSWER IN TERMS OF THE ADVERTISEMENT AND

REMEMBER you are one of possibly hundreds applying for the same position. Put your case before the advertiser so that he may be able to form a MENTAL PICTURE of your suitability.

BE BRIEF BUT CLEAR.—Millions of applications are consigned to the waste-paper basket UNCONSIDERED, because the reader cannot form this picture from the inadequacy of the materials set before him.

RETAIL.

BALHAM.—Wanted, outdoor Assistant, unqualified, for good-class Retail and Dispensing business; knowledge of Photography necessary; good salary to a well-experienced, desirable man; half-day off each week; if applying by letter enclose photo, state salary expected, and full particulars; abstainer preferred. Cooper, Chemist, Balham, S.W.

BATH.—Wanted, gentlemanly Assistant, experienced, unqualified, age about 26, must be neat and accurate Dispenser and good Salesman; high-class Store; short hours; weekly half-holiday; no Sunday duties. Apply, with full particulars, references, salary, etc., to Cater, Stoffell & Fortt, Ltd., Bath.

CITY.—Capable unqualified Assistant wanted, about 25; with City experience preferred; outdoors; close at 8 o'clock, Saturdays 1.30. Particulars and salary required to 163/16, Office of this Paper.

CROYDON (South).—Assistant wanted at once. Noble, Pharmacist, South Croydon.

FOLKESTONE.—Junior Assistant wanted, October 1 (outdoors), for high-class Retail and Dispensing business, with Photography; short hours; half-holiday weekly; others kept. Apply, stating age, height, salary required, references, and enclose photo, to F. G. Curtis, Pharmaceutical Chemist, 94 Sandgate Road, Folkestone.

HARROGATE.—Wanted, unqualified Junior Assistant in high-class Dispensing business; indoors. Apply, stating age, height, references, and salary required, to A. B. Payton, Crown Pharmacy, Harrogate.

HARROGATE.—Wanted, about middle of October, gentlemanly Assistant with first-class experience; permanency for suitable man; if married rooms available. Apply, with full particulars, enclosing photo, to Handford & Dawson, 1 Station Bridge, Harrogate.

HERNE BAY.—Locum for about 10 days, September 16 or 17. State references, age, and terms, F. H. Neale, Mortimer Street, Herne Bay.

HORLEY.—Junior wanted (outdoors) for a good-class business. Send full particulars, stating salary, and enclose photo, A. B. Higgs, Chemist, Horley, Surrey.

LIVERPOOL.—Energetic Senior Assistant; outdoors. Full particulars to R. & J. Herman, Pharmacists, Aintree, Liverpool.

LONDON SUBURBS.—Qualified young Assistant Manager for good-class Cash Pharmacy, with experience of modern methods of business, a good window-dresser, and knowledge of Photography; good progressive salary for a capable man. Reply, giving particulars as to age, salary expected, and references, to 163/39, Office of this Paper.

LONDON.—Junior, about 20, wanted; outdoors; busy Cash trade; quick and accurate at putting up stock and not afraid of work. Give full particulars as to experience, references, and salary expected to 163/33, Office of this Paper.

LONDON, S.E.—Early in October (indoors), gentlemanly Assistant, about 25, for first-class Retail and Dispensing. State age, height, salary required, references for last three years, and enclose photo, "Pharmacist" (163/40), Office of this Paper.

LONDON, W.C. — Junior Assistant at once; good Salesman, address, and appearance; neat handwriting essential. F. G. Curtis & Sons, 20 Bury Street, W.C.

LONDON, S.W.—Junior wanted; outdoors; about 22; good Counterman and Dispenser; Photography. Apply, with full particulars, J. B. Frank & Co., Dispensing Chemists, 310 Brixton Hill, S.W.

LONDON, S.W.—Junior; unqualified; indoors; good-class Dispensing experience; hours moderate. State salary required and references, photo if possible, or interview, W. A. Goodall, 273 Fulham Road, S.W.


RESULTS

OF ADVERTISING IN THIS SUPPLEMENT

LAST WEEK Sept 7/1912

NATURE OF ADVT. REPLIES

DRUG STORE MANAGER	25
TRAVELLER REPRESENTATIVE	20
JUNIOR ASSISTANT	14
PACKER	9
	8



This Blackboard demonstrates that Advertisers using these columns get a ready response to their announcements. The figures only refer to some of the letters RECEIVED AT OUR OFFICE on behalf of Advertisers who use a number or name of place.

LONDON, S.W.—Wanted, qualified Assistant; age about 23. Dyson & Co., 35 Gloucester Road, South Kensington.

LONDON, W.—Wanted, smart unqualified Assistant, with general knowledge of trade. Apply, stating age and full particulars, to H. A. Irwin, 2 Station Parade, Ealing Common, W.

LONDON, W.—Required, about end of September, Junior with good Dispensing experience; outdoors. Apply, with particulars of previous engagements, stating when disengaged, and salary expected, to Sharpe & Son, 34 High Street, Notting Hill Gate, W.

LONDON, N.W.—Wanted immediately, an experienced Assistant used to good-class Retail and Dispensing business; one with practical Photographic experience preferred. Apply to T. J. Evans, Ph.C., 9 Royal Parade, Golder's Green.

LONDON, W.—Qualified Assistant, with good Dispensing experience. Written application only, in first instance, J. R. Walker, 36 New Cavendish Street, W.

LONDON, S.W.—Unqualified (outdoors), about 25, for Pharmacy and Drug Store; good Counterman; three hours duty every other Sunday; half-day off. State experience, references, age, salary, photo (to be returned), height, etc., 161/21, Office of this Paper.

LONDON, N.—Assistant (indoors); not under 22; accustomed to a good London suburban or middle-class country trade preferred; half-day off weekly. Apply, stating experience, references, when disengaged, and salary required, Barnard & Son, 115a Stoke Newington Road, N.

LONDON, W.—Assistant required (outdoors), accustomed to a good-class Dispensing business. Apply, W. Ive, Chemist, 221 High Street, Kensington, W.

LONDON, S.W.—Wanted at once, Assistant; good-class Store trade, with some Photographic; no Sunday duty. Usual particulars, with salary required, to "Danton" (163/6), Office of this Paper.

LONDON.—Qualified Assistant; outdoors; Photography; Store experience; permanency; also unqualified Assistant; must be good Counterman. 164/9. Office of this Paper.

MIDLANDS.—Assistant wanted (outdoors), age 20 to 25, for Light Retail Village business; easy hours; weekly half-holiday; no Sunday duty. Particulars of experience, age, height, salary required, and when disengaged, to "Acacia" (161/24), Office of this Paper.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Assistant Dispenser wanted; commencing salary £65 per annum. Applications, with copies of three testimonials, to be sent on or before September 23, 1912, to Mr. J. K. Millward, Secretary-Superintendent, Hospital Offices, Newport, Mon.

OLDHAM.—Qualified Assistant for brisk Retail trade; must be quick and reliable, a good Salesman. State age, height, experience, references, and salary required, enclosing photo, 160/25, Office of this Paper.

RHYL.—Wanted, a qualified Assistant to manage Branch Shop with Sub-Post Office attached; must be honest, trustworthy, knowledge of Photography; abstainer. Apply, with photo, to Gratton, Chemist, Queen Square, Rhyl.

SCARBOROUGH.—Wanted, an Assistant (outdoors) accustomed to first-class Retail and Dispensing. J. Clare, Clare & Hunt, Harcourt Place, Scarborough.

SEAFORD.—Wanted, an Assistant; age about 26 years; must be reliable, good Counterman and Dispenser; outdoors. Apply, L. Cameron, Pharmaceutical Chemist, Seaford, Sussex.

SOUTHAMPTON.—Wanted, qualified Assistant (outdoors), with good Dispensing and general experience; one only kept. Please send references, state salary required, and usual particulars to H. Ferryman, Dispensing Chemist, Southampton.

SOUTHSEA.—Wanted, Assistant, accustomed to good-class Retail and Dispensing business; outdoors. Apply, giving full particulars and enclosing carte (to be returned), to T. A. White, Pharmaceutical Chemist, Elm Grove, Southsea.

TUNBRIDGE WELLS.—Assistant required in high-class modern Pharmacy; Dispensing and Photography; outdoors. State age, height, experience, and salary required, photo (returnable), H. S. Pearmund, Pharmaceutical Chemist, 47 High Street, Tunbridge Wells.

WORTHING.—Assistant wanted; outdoors, 35s. weekly; or indoors (bachelor establishment) could be arranged; Dispensing and Photographic; alternate Sunday duty two hours. State full particulars R. J. MacDermott, Chemist, 13 Rowland's Road, Worthing, Sussex.

AN Assistant wanted at once, with a view of purchasing a Chemist's business in a populous colliery district, Glamorganshire; returns between £800 and £900; Patents under £200; no opposition; valuable Proprietaries; or to an immediate purchaser £350 will be accepted; a chance seldom met with. 162/3, Office of this Paper.

ASSISTANT.—There is a vacancy in the establishment of a large firm of Manufacturing Chemists for a Junior Assistant with Minor qualification; applicants should be good Salesmen and of good address; age from 21 to 25. Apply by letter, enclosing photograph (to be returned), to 45/69, Office of this Paper.

ASSISTANT, unqualified, indoors, good reference and steady habits essential, for Light Retail and Dispensing business; very comfortable berth. Apply personally (if by letter, give full particulars), Graham, Pharmacist, 9 Station Parade, Willesden Green, London, N.W.

ASSISTANT wanted by about September 29, capable taking charge of small Branch Drug Store; outdoors (or can have house); tho duties light; no Sunday work; salary moderate, commission; an energetic middle-aged man not objected; Extractor; Croydon district. "D," c/o Davy, Hill & Hodgkinson, 22-30, Graham Street, City Road, E.C.

BRANCH Manager, qualified, wanted at once, to live on premises; must have undeniable references; married preferred. State full particulars to Anderson & Virgo, Chemists, Worcester.

CAPABLE qualified Assistant, about 24 years of age, required for a London Pharmacy. Apply to "A. F. P.," c/o S. Maw, Son & Sons, 7 to 12 Aldersgate Street, London, E.C.

DISPENSER required by firm of Doctors near London (Surrey); must be accustomed to the routine of a good-class practice and have had considerable experience in Dispensing; no ladies. Applications, giving full particulars of age, experience, references, and salary required, to 158/29, Office of this Paper.

IMPROVER or Junior Assistant wanted (indoors) for good-class business, with knowledge of Photographic trade. State salary required in first letter, photo, also references, Williams & Smith, Horsham.

IMPROVER or Junior wanted. State experience and salary required (outdoors), 159/15, Office of this Paper.

JUNIOR Assistant wanted; salary 30s. to 35s. per week, according to ability. Please state age, height, experience, references, and when disengaged in first letter, or apply personally to Bishop & Vincent, 459 Holloway Road, London, N.

JUNIOR Assistant wanted, with knowledge of Photography, able to develop films, etc. State age, height, salary (outdoors), and when disengaged, enclose photo if possible, Geo. Durrant & Son, Hertford.

JUNIOR or Improver wanted; one accustomed to a Shipping business preferred. State salary required (outdoors) and usual particulars to T. B. Bamford, The Talbot Pharmacy, Port Talbot.

JUNIOR or Improver; outdoors; good-class Retail, Dispensing, and Photographic. Particulars, including age, height, experience, salary expected, when disengaged, references, and photo if possible, to Matthews (Cash Chemists), 145 Hoppers Road, Winchmore Hill, N.

JUNIOR Assistant wanted for a Dispensing and Light Retail business; easy hours; arrangements can be made for time to study. Apply, stating age, height, experience, and salary required, Bell (162/19), Office of this Paper.

MANAGER or Manageress for Toilet goods; also experienced Female Assistants. Age, height, photo, experience, references, the New James Store, Nottingham.

OUTDOOR unqualified Assistant about 23, accustomed to good-class Light Retail and Dispensing; must be good window-dresser and have fair knowledge Photography; no Sunday duty; York, about October 10; Applicants must give full particulars, photo (returnable); state salary; preference given to one seeking permanency. 162/4, Office of this Paper.

PHARMACEUTICAL.—Wanted, for large Irish house, qualified Assistant; thorough knowledge Retail and Dispensing; young, pushing Salesman; one who has been at large Stores preferred. State age, experience, salary (outdoors), references, "S. T." (39/57), Office of this Paper.

PORTER (Junior), accustomed to a Chemist's business, under 25 years of age; good Packer. Apply, Secretary, 80 Gloucester Road, South Kensington, S.W.

QUALIFIED gentlemanly Assistant (indoors) about 24; high-class Dispensing business. Apply, giving full particulars, references, salary, etc., Sangster & Co., Chemists, Hampstead.

QUALIFIED Assistant wanted early in October; 25 to 35; good Extractor, Impressions, and Fillings; knowledge of Photography and Optics desirable; short hours; no Sunday duty; outdoors. Full particulars, with salary required, to H. S. Adams, Chemist, Pangbourne.

QUALIFIED Junior; about 24; must be good Dispenser and Front Counterman; exceptional opportunity for acquiring modern experience in Pharmacy and Optical Department; a progressive and comfortable permanency assured to really good man. State full particulars and salary required (indoors), enclosing photo, Body, "Westwood," Britannia Road, Westcliff-on-Sea.

QUALIFIED Branch Manager wanted, middle-aged preferred, for permanency; must be good Prescriber, polite Salesman, with undeniable references; £2 5s. per week. Send full particulars and photo to "S. W.," c/o Messrs. Oldfield, Pattinson & Co., New Bridge Street, Manchester.

REQUIRED at once, in good-class Seaside business, capable Assistant; unqualified; outdoors; must be good Dispenser and have some knowledge of Photography. Apply, stating age, height, and salary required, with photo, to "F. H.," c/o Messrs. Wright, Layman & Umney, Southwark Street, London, S.E.

REQUIRED immediately, smart qualified Manager for middle-class business. State age, experience, and when at liberty, 45/39, Office of this Paper.

REQUIRED, Senior Counterman; must be good Salesman and Window-dresser and of good appearance; also a Junior Assistant, accustomed to West-End trade. Write or call Saturday morning between 10 and 12, Spink, 105 Great Russell Street, W.C.

SENIOR, qualified, about 24, for good-class Dispensing business. Apply, with full particulars, to J. Parrott, Pharmacist, Richmond Hill, Surrey.

T. JONES & Co., 5 Putney Hill, require, about October 1, an unqualified Assistant, age about 24; must be accustomed to good-class Dispensing, and have good references. Apply, with photo, if convenient, to Mr. Amoorc.

UNQUALIFIED Junior required at once for business in the Midlands; permanency; outdoors. State age, salary, and when at liberty, 45/93, Office of this Paper.

UNQUALIFIED Manager for Country Mixed business near Manchester, married, to live on premises; good house; half-day; no Sunday duty; nice situation for steady reliable man; house and gas free. State age, salary, and give references in first letter, Cottrell, Pharmacist, Delph, Oldham.

WANTED, a qualified lady, Minor or Major, for a new business upon Stow Park, Newport, Mon.; high-class and high middle-class. Salary required (indoors and outdoors), height, and photograph, Lloyd Jones, Aldwyn Towers, Malvern.

WANTED at once, a qualified Manager for small Chemist's shop near Oxford Street, W.; must be steady and well recommended; able to take sole charge. Apply, by letter only, Taylor, 151 Oxford Street, W.

WANTED, two men or two women to price-out Stock-books. State when disengaged, salary required, Lion Drug Stores, Brighton.

WANTED, Assistant, qualified, outdoors, age 23-29, for Light Retail and Dispensing business. State salary required and references. Also Junior; indoors. Perrett & Co., 25 Devonshire Road, Bexhill-on-Sea.

WANTED, an Assistant, about 23 to 25 (qualified), for Dispensing business. State age, height, salary (indoors), when disengaged, experience, if Dispensing and Photography, names of two last employers, and time with each, 161/7, Office of this Paper.

WANTED at once, qualified Manager for Branch, East End; must be steady and well recommended. Apply, "Verax" (45/68), Office of this Paper.

PRIVATE Company forming to continue buying established Mixed Retail businesses, Midlands, returning £1,500-£3,000 yearly (when such are offered), invites applications from qualified men and women (preferably under 30) as Managing Partners, who must deposit £100 as bond to lie at bank as reserve; each business run separately; thoroughly overhauled; stock made to turn over four times yearly; modern bookkeeping; comfortable home; manager buys goods, writes cheques, bank balance kept below £100 bond; salary, share profits (20 per cent. on bond); concise particulars of age, health, experience, married or single, life insurance, references, capital must be on postcard; applications not answered in four weeks may be considered unsuitable; no references written to except by arrangement. 163/30, Office of this Paper.

WHOLESALE.

A LONDON Wholesale house require the services of a competent Travelling Representative in Sales Department; must be experienced in Pharmaceutical Proprietaries and introductory work with Medical profession and Retail trade; sales-extension from headquarters and supervision of travelling staff; applicants should possess advertising literary qualifications with trade experience. Replies, by letter, giving fullest particulars, received in confidence by "Semper" (38/230), Office of this Paper.

AN energetic, able Representative required by Druggists' Sundry and Perfumery House for London connection; liberal terms to suitable man. State age, salary, and full particulars of past work. "Y." (43/11), Office of this Paper.

COUNTER hand, Wet or Dry, aged about 18-19, with experience in filling Export orders, wanted by Loudon Druggists. Write full particulars of previous employment, wages expected, and if disengaged, to 163/32, Office of this Paper.

ENERGETIC Traveller wanted at once, young and experienced, by Druggists' Sundry firm for the South and Middle of England. Apply, 159/17, Office of this Paper.

GENTLEMAN as Traveller for high-class Perfumery and Toilet lines; provinces. Apply, "Statim" (40/62), Office of this Paper.

JOINT Manager sought for Australian branch of progressive English Agency house; must be experienced in Pharmaceutical Proprietaries; sales-extension with Medical profession and Retail trade, also in control of travellers; applications are invited, in confidence, from those of proved character, qualified for a position of trust, with travelled experience of the ground and connections. Give usual particulars, by letter, confidentially, to "Idem" (38/23), Office of this Paper.

PAINT Trade.—Wanted, a practical working applied Chemist, of unquestioned ability as appertaining to the production of prepared Paints, Japans, Enamels, and Varnishes at competitive prices, if on unorthodox lines all the better; salary in accordance with abilities. Write fully, "Determined" (147/20), Office of this Paper.

REPRESENTATIVES required for a Toilet Spécialité with a real selling proposition behind it; grounds open. London, South Coast, and Scotland. "Thola" (44/48), Office of this Paper.

STOCKKEEPER wanted, youth not over 20, as Assistant in stockkeeping department for a Pharmaceutical house. Apply, 43/50, Office of this Paper.

WANTED, Typist, lady, about 25 to 30, accustomed to names of Drugs, etc.; state if shorthand and filing experience. Secretary, Baiss Brothers & Stevenson, Ltd., 175 Grange Road, Bermondsey, S.E.

WANTED, by Canadian Wholesale Drug firm, experienced Chemist, competent to take charge of Laboratory. Reply, stating experience, views as to salary, and full information as to character of goods you are accustomed to manufacture, 41/40, Office of this Paper.

WANTED, a capable man with good all-round experience in the Manufacture of Proprietary Articles and Pharmaceutical Preparations; permanency and good opening to the right man not afraid of work. "Specialities" (257/45), Office of this Paper.

WANTED, qualified Chemist (male or female); Major preferred; experience in the manufacture and put up of high-class Toilet Preparations essential. State experience and salary required to 44/55, Office of this Paper.

WET Counter Assistant; must be experienced; age 20-22; also Dry Floor Assistant, accustomed to Export work, capable of taking charge of small department: London Wholesale Druggists. "Senegal" (43/1), Office of this Paper.

WET Floor.—Competent Counter hand, aged about 23-24, wanted by London Export Druggists. Write, stating full particulars of previous experience, age, wages expected, and if disengaged, to 158/26, Office of this Paper.

WET Counterman wanted; age about 21; one accustomed to filling Doctors' orders preferred. State experience, wage required, reason for leaving, etc., to W. H. Legat, Son & Co., Wholesale Druggists, Bolton.

SITUATIONS OPEN

(Colonial, Indian, and Foreign).

3s. 6d. for 50 words or less; 6d. for every 10 words or less beyond, prepaid. Replies addressed to this office will be forwarded to the advertiser for an additional charge of 6d.

BRUSSELS.—Wanted, till end of year or Christmas, experienced Assistant; accurate Dispenser; outdoors; tall and good handwriting; give full particulars, stating salary, references, enclose photo; one with some knowledge of French preferred. Edgar Stouff, 288 Avenue Louise, Brussels.

CAPE TOWN.—Qualified Assistant required; salary £20 month; age about 26; passage paid. Please apply, "R. L.," c/o S. Maw, Son, & Sons, 7 to 12 Aldersgate Street, E.C.

CAPE TOWN.—Required urgently, a good qualified Junior Assistant; single; second-class passage paid out; salary £15 per month first year, £16 per month second year, £17 per month third year; sleeping accommodation provided; must be neat and accurate Dispenser. Apply, 39/51, Office of this Paper.

INDIA.—Minor man wanted for old-established house in Calcutta; four years' agreement; passage paid out and home; must be single, under 25, and have first-class references. Apply, with particulars of experience, to 163/14, Office of this Paper.

JAPAN.—A thoroughly capable, gentlemanly, young man, about 25, qualified, required for a first-class English Chemist's in Japan; 5 years' agreement; passage paid out and home, and liberal terms to suitable candidate. Apply, with full particulars of previous experience, to 20/37, Office of this Paper.

NATAL.—Required immediately, qualified Assistant, age about 24 to 28; 3 years' agreement at £18, £19, and £20 per month; passage paid out, with £5 expenses *en route*; total abstainer; excellent references required. Apply, 37/15, Office of this Paper.

RHODESIA.—Wanted, an Assistant, not necessarily qualified, but possessing an Optical qualification; must have a good knowledge of Photography; unmarried; under 30 years of age; salary (outdoors) £20 per month first year, £22 10s. second year, £25 third; 3 years' agreement; passage paid out. Apply, by letter only, Lennon, Ltd., 14 Lafone Street, London, S.E.

SOUTH AFRICA.—Qualified Assistant; about 24; abstainer preferred; must have first-class Dispensing experience and a knowledge of Photography would be an advantage; three-year agreement to be signed; second-class passage paid out; salary first year £160 per annum, second year £180, third year £200, and free quarters provided. Apply, by letter, "C. C." (44/36), Office of this Paper.

WANTED, Assistant for Chile; age about 25; good Dispenser and smart Counterman; 5 years' engagement; first year £150, second year £160, third year £180, fourth year £190, fifth year £200; second-class passage. Address, "J. M. T.," c/o Evans Sons Lescher & Webb, Ltd., 56 Hanover Street, Liverpool.

SITUATIONS WANTED.

1s. for 12 words or less; 6d. for every 10 words or less beyond, prepaid.

NOTE.—Replies can be addressed to this office and forwarded to the Advertiser for an Additional charge of 6d.

[HOME].

RETAIL.

AS Locum, Relief, or permanent; unqualified; disengaged. "Chemicus," 14 Calthorpe Street, Bloomsbury.

AS Manager (49), married, qualified, with view to succession or purchase on easy terms; good-class Dispensing and Family business with scope for side-line departments preferred. Elwell, 6 Burtleigh Road, Enfield, Middlesex.

ASSISTANT desires situation, having an opportunity of learning mechanical Dentistry; terms arranged. "Aluta" (163/17), Office of this Paper.

ASSISTANT; disengaged September 30; good at window, counter, stock, and country journeys; 7 years' present reference. Hastings, c/o Neave, Chemist, Witney, Oxon.

ASSISTANT; 22; good all-round experience; Photography; London only; disengaged shortly. "Statim" (160/18), Office of this Paper.

ASSISTANT; 21; Seaside or Eastern Counties preferred; easy hours; smart Counterman; disengaged; West-End Dispensing. V. Arnfield, 15 Aylsham Road, Norwich.

ASSISTANT; outdoors; good Counterman and Window-dresser; capable Dispenser; Photographic experience in London and provinces; unqualified. "Aspirin," 318 Slade Road, Gravelly Hill, Birmingham.

ASSISTANT; tall; gentlemanly; 22; unqualified; high-class Dispensing; Light Retail; Photography; outdoors; disengaged; Midlands preferred, but not essential. "Helmitol," G.P.O., Wolverhampton.

ASSISTANT; 22; disengaged October 22; Photography, Dispensing, and Counter experience; North preferred. "Reliable" (157/31), Office of this Paper.

ASSISTANT; tall; capable; Dispensing; Counter; Photography; disengaged end of September. "Extractor" (159/3), Office of this Paper.

ASSISTANT; unqualified; 14 years' experience; good Dispenser; used to Prescribing business; disengaged; outdoors preferred. Stanley Wilmshurst, 3 North Villas, Hereford.

BOURNEMOUTH.—Gentleman desires situation in Bournemouth as Senior or Dispensing Assistant; unqualified; first-class West-End experience and highest references; capable of taking entire charge. Address "Permanency" (157/39), Office of this Paper.

BRANCH Manager; qualified; 35; married; energetic; thoroughly experienced, Dispensing, Prescribing, Photography, Extractor. "Pharmacist," 5 Rutland Gardens, Harringay, N.

BRANCH Manager or Locum; 30; qualified; 14 years' varied high-class experience, London, seaside, and provinces; disengaged 27th; abstainer; good references; single. Tavener, Stourton House, Queen Street, Lynton, N. Devon.

CAPABLE Manager, Assistant, Locum; permanency; tall; qualified; references; disengaged. 36 Ranelagh Gardens, Ravenscourt Park, W.

CHARGE of business; qualified; high-class experience and reference; 13 years in present position. Milton, Read & Orchard, Chemists, Salisbury, Wilts.

COMPETENT Assistant; unqualified; West-End and suburban experience, Dispensing, Photography; Window-dresser; outdoors; disengaged September 30. Williams, 34 Doughty Street, W.C.

CORNWALL or Devon.—Experienced qualified Chemist, middle-aged, seeks Management or otherwise; live out; sea preferred. "E.," c/o Evans, Gadd & Co., Exeter.

DENTIST (registered), middle-aged, desires Surgery charge; Anesthetics. "Dentist" (162/25), Office of this Paper.

DISENGAGED, Assistant or Locum; any period; competent, reliable, experienced. "Chemicus," 68r Station Road, Camberwell.

DISENGAGED; competent, energetic Branch Manager, Assistant; Drug Stores; unqualified; middle-aged; Prescriber and Extractor. "Squills," 190 Sheringham Avenue, Manor Park, E.

DISENGAGED September 30; unqualified; 25; tall; married; take charge; permanency; competent and reliable Dispenser and Counterman; nearly 12 years' all-round experience; North of England preferred. "Chemicus," 25 Thanet Road, Margate.

DISPENSER (lady) requires post, Doctor or Institution; Surgical Dressings. Apply 161/15, Office of this Paper.

DISPENSER or otherwise; qualified; thoroughly experienced all branches modern business; outdoors; London or suburbs. 161/38, Office of this Paper.

DISPENSER (Hall) desires position, Doctor or Institution; good London and country experience; excellent references. 148/21, Office of this Paper.

DRUG STORES.—Wanted, situation as Manager; well up in Mixed trade; last Store managed takings doubled. 162/103, Office of this Paper.

EXPERIENCED Manager or Locum, disengaged; 36; unregistered. "Chemists," 27 Portsmouth Street, C-on-M., Manchester.

GENTLEMAN (33) invites correspondence with view to engagement about November 1; energetic, experienced; references good; used to control of staff, bookkeeping, Photographs, Traveling, Medical Wholesale, Institution Dispensing; all communications in confidence; unregistered. 160/3, Office of this Paper.

GERMAN Apotheker, knowing French and some English, seeks position by October 1. Lubenau, Forndorferstr. 55, Berlin, O.

JUNIOR Improver (19), tall, 4½ years' experience, desires situation; excellent references. "J. T.," 235 Tiverton Road, Bournbrook, Birmingham.

JUNIOR (23) seeks engagement; good-class trade; suburbs; Dispensing, Photography; 5 years' experience. Address, 9 Ingleton Villas, Greenway, Uxbridge.

JUNIOR; 3½ years' good experience; Liverpool or district; good references. 159/11, Office of this Paper.

JUNIOR requires situation; evenings only; Birmingham district. "C.," 94 Regent Street, Smethwick.

JUNIOR (20) requires situation October; excellent references; Photography; London, S.W., preferred; time for evening classes. "Cornwall," c/o Martin, 164 Pretoria Road, Streatham, London, S.W.

JUNIOR (20), disengaged September 15, desires situation; London preferred; indoors; good references. Apply, Bowen, c/o J. Davies, F.S.M.C., Pharmaceutical Chemist, Llanelli, W.

JUNIOR Assistant; Dispensing, Retail; London experience; 24. Hamn, 282 Union Street, Torquay.

JUNIOR; 20; 5 ft. 10½ in.; Birmingham district preferred. Cattell, Swan Hotel, Stourport.

LADY; qualified as Manageress; excellent testimonials and experience; London. 163/38, Office of this Paper.

LADY Dispenser; qualified; experienced; disengaged. "C.M.P.," 33 Bedford Road, Ilford.

LADY Dispenser; Hall qualification; Locum or permanency. K. Robinson, North Wingfield, Chesterfield.

LADY Dispenser; 5 years' reference. Wright, 35 New Church Road, Wellington, Salop.

LADY Dispenser (Hall); experienced, careful, reliable; bookkeeping. 2 Selwyn Road, Upton Manor, E.

LEEDS.—Manager; qualified; married; experienced; would entertain Partnership or succession. Apply 160/6, Office of this Paper.

LOCUM preferred or Manager; excellent references; wide experience, North and South. 160/2, Office of this Paper.

LOCUM Tenens.—M. Smith, 15 Rostron Street, Chapel Street, Levenshulme, Manchester, will be at liberty after 20th inst.; every grade of Pharmacy inclusive; qualified and competent.

LOCUM; qualified; 36; reliable; disengaged September 21. c/o Stokes, Chemist, 595 Fishponds Road, Bristol.

LOCUM or permanency; 24; disengaged; unqualified; references. Leman, c/o Gelling, Chemist, Douglas.

LOCUM or Assistant; first-class experience; disengaged. "Dispenser," 24 Lennox Street, Weymouth.

LOCUM, qualified, experienced, good references, seeks re-engagement. "Cortex," 2 Vivian Road, Wellesborough.

LOCUM or Manager; qualified; Midlands preferred. "Pharmacist," The Cottage, Dover Street, Bilston.

LONDON.—Young man (24), with Wholesale and Retail experience, desires a change as Druggist's Sundry Shop Assistant. Write, "F. R. B.," 8 Buer Road, Fulham, S.W.

LONDON.—Time for attending lectures; good references; age 23. State full particulars. "Rowland," c/o Smith, Chemist, Newark.

M.P.S., D.B.O.A. (27), qualified Optician, married, requires position as Branch Manager; 11 years' all-round experience; Dispensing, Photographics, Prescribing; excellent references; permanency. "Optometrist" (160/14), Office of this Paper.

M.P.S. requires a situation in London as Manager; highest references; salary 60s. "C. A. R. U.," 43 Union Road, Borough, London, S.E.

MANAGER or Locum; thoroughly experienced, Dispensing, Prescribing, Photography; highest qualifications and best references; married; abstainer. Everett, Pharmacy Stores, Loughton, Essex.

MANAGER or Senior; unqualified; Hall qualification; single; 46; good clean appearance; abstainer; disengaged; town or country. "S.," 51 High Street, Camden Town.

MANAGER; Locum; experienced; 36. Gardam, 389 High Street, Cheltenham.

MANAGER; qualified; experienced; reliable; excellent references; age 32; married; disengaged shortly. 161/8, Office of this Paper.

MANAGER; 34; experienced; married; Dispensing, Photography, little Optics. "Qualified," c/o Mr. Rhodes, Pharmacist, Brigg, Lincs.

MANAGER or Senior; qualified. "S.," 8 Moss Hall Villas, Ballard's Lane, N. Finchley, N.

MANAGER; qualified; 30; married; thorough experience; permanency. "S.," 147 Cotham Brow, Bristol.

MANAGER.—Advertiser (35), married, seeks permanency; tall; smart appearance; excellent London experience; N.W. preferred; disengaged end September. "Ph.C.," 91 Temple Road, Cricklewood.

MANAGER; Locum; reliable; qualified; exceptionally good all-round experience; satisfactory references; permanency preferred. "Aspirin," 238 Derinton Road, Tooting.

MANAGER; 35; qualified; excellent references; good London (City, W., S.E.) and provincial experience. "Chemist," 81 Revelstoke Road, Southfields, S.W.

MANAGER; 38; unqualified; tall; married; disengaged; experienced. Thornton, 15 Studley Road, Forest Gate.

MANCHESTER.—Junior; 21; used to good-class Dispensing business; of good appearance; can give personal interview Monday, 16th. 376 Cleethorpe Road, Grimsby.

PART-TIME.—Major Student in London seeks situation early in October, either mornings or afternoons. Reply, C. Harry, 38 Station Road, Redhill, Surrey.

PART-TIME; 3 evenings weekly; unqualified; aged 30; highly experienced. "Student," London College of Pharmacy, Clapham Road, S.W.

PHARMACIST, elderly, is open to an engagement as Dispenser, or light duties; London. "Statim," 416 Mare Street, Hackney.

PRACTICAL Chemist (qualified 1898), good Salesman and diligent worker, has run small Laboratory economically, with 7 years' experience as Manager, seeks re-engagement; resident or outdoors; married; free October 1. "England," 14 Sydenham Road, Bristol.

QUALIFIED; good references; experienced; disengaged September 18. "W.," 74 Holmesdale Road, Coventry.

QUALIFIED; 32; thoroughly competent; permanency or Locum. "M.P.S.," 15 The Grove, Ealing.

QUALIFIED expert Chemist (34), up-to-date methods, master of all details necessary for successful trading, working businesses for sale a speciality; good results; I provide an antidote for your Store competition; replies take three days. 163/13, Office of this Paper.

QUALIFIED; Locum Tenens; experienced; disengaged August 17; Valuation, Stocktaking, Sales negotiated, Balance Sheets prepared, etc.; highest references; disengaged October 7; J. W. Simpson, 51 North Road, West Bridgford, Notts.

QUALIFIED Manager (28), tall, 14 years' experience, up-to-date ideas, with view succession, or invest up to £400 now. 161/25, Office of this Paper.

QUALIFIED Chemist (24), with good English experience, abstainer, excellent references, desires situation as Manager or Assistant, either Abroad or in the Colonies. 161/5, Office of this Paper.

QUALIFIED (24), good Retail experience, requires post, giving opportunity for good-class Dispensing; good reference. Moorhouse, 35 Spaines Road, Huddersfield.

QUALIFIED; Assistant or Manager; 25; tall; first-class City, West-End experience; excellent references; foreign languages; disengaged; London or foreign. "G," 113 Leadenhall Street, E.C.

QUALIFIED; Manager or Assistant; capable, energetic; good reference; references; London preferred. "B.," 5 Norfolk Road, Bayswater, W.

QUALIFIED; elderly, active; best experience and references; temporary, permanency; moderate salary. "C.," 87 Chalk Farm Road, N.W.

QUALIFIED; 28; excellent London and provincial experience; outdoors. Lookhart, 1 Bayne Road, Lewisham.

QUALIFIED desires experience; country preferred. "C.," Rosemont, Harbledown, Canterbury.

QUALIFIED; 25; experienced; Counter and Dispensing; Locum or permanency. Rees, 105 Church Road, Hove.

QUALIFIED competent woman Dispenser wants evening work; likes Cash Surgery work; makes Preparations. "R. W.," 43 Brighton Road, Stoke Newington.

QUALIFIED (25), single, requires situation as Dispenser. "W. H. W.," 28 Finchbury Street, Hull.

QUALIFIED man seeks permanency, with or without view to interest, in sound brisk business; branch management with share entertained; single; good varied experience; any locality. "Genuine" (159/29), Office of this Paper.

QUALIFIED, London and provincial experience, 34, desires permanency; near London or seaside preferred. 159/37, Office of this Paper.

SENIOR Assistant; disengaged; reliable and trustworthy; experienced in all branches of the trade; unqualified; married; permanent or temporary. "Bonus," 571 Chesterfield Road, Woodseats, Sheffield.

SURGEON'S Dispenser or Locum; 40; single; sober; reliable; experienced Extractor; moderate salary; free 25th. "Dispenser," Public Dispensary, High Street, Stoke Newington.

35S.: Branch Manager or unqualified Assistant; Prescriber, Dispenser, Extractor; Gas and Local Anaesthetics; permanency; married; good references; abstainer. 158/8, Office of this Paper.

UNQUALIFIED; 38; Prescriber, Extractor, Dispenser; outdoors; country. 162/11, Office of this Paper.

UNQUALIFIED; 12 years' splendid experience, town, country, seaside; single. "Pix" (161/35), Office of this Paper.

UNQUALIFIED Junior (22) desires situation, October; energetic, trustworthy; good all-round experience; excellent references. Dalrymple, 81 St. Mary's Road, Faversham.

UNQUALIFIED Manager (35), all-round experience, Dispensing, Prescribing, Veterinary, Agricultural, good Salesman, Stockkeeper, etc., abstainer, with competent wife, seeks permanency; salary and commission. Address, "Manager," Barkwith House, Immingham Dock, near Grimsby.

UNQUALIFIED Assistant; disengaged; single; country preferred, but not essential; steady, reliable; moderate salary; good references; Prescriber and Extractor; used to Mixed business. Please state full particulars in first letter, White, Oxford House, Ashmore Road, King's Norton, Birmingham.

UNQUALIFIED Assistant; 21; good country and suburban experience, Agricultural, Dispensing, and Photographic; good references; outdoors; disengaged September 23. Sharman, c/o Lasham, Romford.

YOUNG man desires position as Chemist's Assistant; Manchester or suburbs preferred. 157/24, Office of this Paper.

WHOLESALE.

Trade circulars, samples, and printed matter can in no case be forwarded.

ADVERTISER, qualified, good connection, is desirous of engagement as Traveller on commission with up-to-date Drug or Sundry house. 160/20, Office of this Paper.

ADVERTISER, 20 years' Wholesale and Retail London experience, seeks situation. "W. H.," 73 Midmay Grove, N.

COMMISSION Agency (24), 6 ft., energetic, wishes to Represent a well-known Drug House; good connection, Barnsley centre for Lancashire, Yorkshire, and Potteries. "Bonus," Fern Bank, Park Grove, Barnsley.

DRIES, Sundries.—Wanted, position Department Manager; used quick trade; excellent references; 20 years same firm. Smith, 38 Houghton Street, Uppingham Road, Leicester.

EXPERIENCED Traveller (Chemist), who will shortly be leaving England, wishes to Represent in British Columbia a firm in Drugs, Druggists' Sundries, Chemicals, or allied goods on commission or otherwise; references. 154/25, Office of this Paper.

ONE of the best-known Representatives in Lancashire, amongst Doctors and Chemists, is open to Represent first-class house in conjunction with present firm; highest references and proof of ability. 162/1, Office of this Paper.

QUALIFIED Chemist, with high-class Pharmaceutical training, knowledge of Wholesale and office routine, desires position (home or abroad) with good Wholesale firm. Apply 154/24, Office of this Paper.

REPRESENTATIVE (33) seeks berth; single; abstainer; highest credentials; London and provincial experience; Essences, Essential Oils, Perfumery, Toilet Requisites. "Success" (163/15), Office of this Paper.

SOUTH AFRICA.—Representative (33), with ability and experience, desires to Represent high-class house in South Africa; late medical assistant; son late medical man; 5 years with present house, calling upon Doctors, Veterinary and Dental Surgeons, Chemists, and Institutions; unexceptionable references and testimonials. Replies to 158/28, Office of this Paper.

TABLET-MAKER, 12 years' experience, requires situation; excellent references; thoroughly acquainted with modern methods of tablet-making in all its branches. Address, G. Smith, 55 Norman Street, Leicester.

TRAVELLER, with good connection Scotch Chemists, open to Represent Sundry house; disengaged October 1. 157/28, Office of this Paper.

TRAVELLER wishes to Represent additional house on part expenses and commission basis; Medical, Chemists', or Veterinary Preparations and Sundries; enterprising house essential; highest references. "Probang" (160/34), Office of this Paper.

WANTED situation as Manufacturer of Druggists' Specialities, Medicated Wines, etc.; 11 years' experience with large firm as Buyer, Manager, Wholesale and Retail. 162/13, Office of this Paper.

YOUNG gentleman (22) desires position with prospects; has served apprenticeship; nearly 7 years' Retail, Manufactory, and all-round experience; well educated, smart, energetic. "Ambitious" (163/9), Office of this Paper.

SITUATIONS WANTED

(Colonial, Indian, and Foreign).

1s. for 12 words or less; 6d. for every 10 words beyond, prepaid. Replies addressed to this office will be forwarded to the advertiser for an additional charge of 6d.

This heading is reserved for assistants seeking situations in the British Colonies, India, and Dependence; or elsewhere abroad.

FRANCE.—Dispenser (lady), Apothecaries' Hall, seeks post to an English Doctor in France. 155/37, Office of this Paper.

GERMAN, Manager of Paris Pharmacy, desires situation, Riviera; experienced in English Pharmacy. Bruno Kastan, 59 Pasteur Ed., Paris.

MISCELLANEOUS.

MOADAM & TUCKNISS, Sharedealers, Bank Chambers, Blackheath, S.E. Established 1898. Telephone 81 Lee Green.

SHARES for SALE (free of commission, subject).—20 Barclay & Sons' Ordinary, 2s. 10d.; 200 Idria "A," 6 per cent. Preference, 4s. 10d.; 100 Lewis & Burrows Ordinary, 2s. 10d.; 50 6 per cent. Preference, 10s. 10d.; 100 Alby Carbide at 27s. 9d.; 150 A. J. White Preference, 8s. 9d.; 240 £1 fully-paid G. Baldwin Chemist's and Herbalist's, 16s. 3d.

WANTED (subject).—50 Wright Layman Preference, 20s. 9d.; 500 A. J. White Ordinary, 1s. 3d.

List of Shares for Sale and Wanted sent free on application. Every effort made to effect business for Buyers or Sellers in all Stocks and Shares. Bankers, London and County and Westminster.

SECOND-HAND CHEMISTS' FITTINGS.—We have an exceptionally fine selection of these in all sizes; prices are right and goods are in first-class condition; we shall be pleased to supply particulars and prices. Call or write, **RUDDUCK & CO.**, 262 Old Street, E.C.

CHEMISTS' SHOPFITTINGS (second hand).—Ranges Mahogany Drawers, Bevelled Edged, Glass Labels, Cut-glass Knobs, Shelving, Lockers; Mahogany Dispensing-screens; Glass-fronted Counters; Piano-fronted Wall-case, Mirror Centre; Bent Front Counter-cases; Desks; complete Shop-rounds, Window Backs, Glass Shelves, etc.; extensive stock; give-away prices; high-class Fittings, bang up to date; Estimates. **D. MATTHEWS & SON**, 14 & 16 Manchester Street, Liverpool.

CHEMISTS' Shopfittings.—Window Enclosures, Showcases, Silent Salesman, Dispensing Screens, Wall-cases, Perfume-cases, Glass-front Serving Counters, Drug Drawers, Counter Drawers, second-hand, shop soiled, at unbeaten prices; you can't do better; 30 years fitting Pharmacies. Send for free estimate. **George Cook**, The Working Shopfitter, 30 Buttesland Street, East Road (near Old Street Tube Station).

CHEMISTS' SHOPFITTINGS (second-hand).—Very large quantity of Wall Fittings, Show-cases, Dispensing Screens, Perfume-cases, etc., etc., to clear for cash; great bargains; oall and view, or send sizes of what you require; these goods must be sold. **PHILIP JOSEPHS**, 93 Old Street, Goswell Road, London, E.C.

CHEMISTS' FITTINGS (bargains).—16-ft. Drugfitting, mirror Poison Cupboards, Cornice complete, £14 10s.; Mahogany Plate-glass Wall-case, 10 ft., £13 10s.; Mahogany Plate-glass 7-ft. Dispensing-screen, bevelled mirror centre, £5; Serving Counter, 12 ft., Glass Doors, Mahogany Top, £7 10s.; Nests of strong Counter Drawers, from 27s. 6d.; Mahogany and bent Plate-glass Counter-cases, 4 ft. 75s., 5 ft. 87s. 6d., 6 ft. 97s. 6d.; all goods as new. Send for sketches to **H. Mills**, Chemists' up-to-date Shopfitter, Shop Front Builder, Steam Works, 163-5 Old Street, E.C.

OPTICAL DIPLOMAS.

Experienced and successful coaching for the S.M.C. and B.O.A. Examinations by correspondence and personal tuition. Success guaranteed in a few months by our method to students willing to work hard. Reasonable terms based partly on results. Apply Secretary,

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is essential to the Pharmacist. Start now. Send 1d. Stamp and I will send you in confidence samples of my new scheme. This offer is open to pharmacists only. Booklet, "How to Increase Your Business," post free. A South Coast Pharmacist writing, states:—"So many of your ideas and suggestions are excellent; I appreciate them."

BILLYARD ALLISON, Pharmacist & Business Specialist, RETFORD.

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forms an important part of Business Tips of the Bernard Slack System of Increasing Chemists' Businesses. This is a system of six and a half years' reputation which never fails if properly used. Five shillings a week for a year will cover the cost of increasing a small business in its net profit quite £1 a week. Much greater things have been done, but I prefer to do more than I promise rather than less. Putting it "straight from the shoulder"—every week you do not use my system you lose £1. Booklet and all details free, with references simply ad lib. Two window shows every month illustrated.

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EXCHANGE COLUMN

One halfpenny per word with name and address. One penny per word if we register the address and attach a number.

No advertisement inserted for less than 6d.

FOR DISPOSAL.

SHOP FITTINGS

SILENT Salesman, similar Joseph's ten guinea, excellent condition, space wanted; price £7 10s.; nearest offer. **WESTLAND**, Chemist, Tooting.

PROPRIETARY ARTICLES.

15 DOZ. 2d., 3 doz. 6d. Rubwell; what offers, please? **ASHBY**, Stainland.

MISCELLANEOUS.

56 LB. new English honey at 7d., carriage paid; sample. **ROBINSON**, Chemist, Baildon, Yorks.

OVERSTOCKED.—20 gross wasp fly bands, in 5-gross lots, £1 carriage paid, cash with order. **S. A. SHEARD**, M.P.S., Morley, Yorks.

CROWDS attracted.—Clockwork model, goes three hours, cost 9s. 6d., accept 6s., carriage paid, or nearest offer. **LEWIS**, M.P.S., Tisbury.

QUANTITY of slightly used window tickets and display cards, wording suitable to approaching season, small pedestals, glasses, clips, etc., for window-dressing. 2 George Court, Strand, W.C.

WANTED.

OPTICAL books; Minor, Major, Chemists' books; send prepaid for valuation; cash offers per return. **GOWER**, Bookseller, Waterloo, Liverpool.

GOOD selling patents, also drugs, essential oils, etc. Send list, with lowest cash prices, to "BUYER" (45/2), Office of this Paper.

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SECOND-HAND carboys, shop-rounds, drug-fitting, also pill-machine, personal weighing-machine, and counter-scales for small pharmacy. 163/37, Office of this Paper.

TO MEMBERS OF THE CHEMISTS' FRIENDLY SOCIETY (Approved).

Insurance Books; also particulars of Non-State Section are being prepared, and will be issued in the course of the next week or thereby. Members are still being added daily to the State Section.

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THE EXCHANGE COLUMN.

TO BUYERS AND SELLERS.

We take every care to ensure that proprietary and other goods advertised in this column are genuine surplus stock of reputable persons in business, and are compelled to refuse advertisements sent by those who, when occasion requires, decline to satisfy reasonable inquiries as to their bona-fides.

We again call the attention of those who use this column for the sale or purchase of goods to the desirability of using our Deposit System. Some forward goods before they receive money for them, and others forward money to advertisers before they have even seen the goods. Disappointment in such circumstances is bound to happen now and then, and it is to prevent this, as well as to check fraud, that our Deposit System was instituted.

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Practical Notes and Formulae.

Scarlet-red Ointments.

THE "Journal of the American Pharmaceutical Association" publishes the following recipes, among others, for scarlet-red ointment:

Krajca's Formula.

Scarlet-red ... 8 grams
Chloroform oil a sufficiency
Yellow petro-
latum to make 100 grams
Triturate the scarlet-red
with sufficient chloroform
oil (chloroform and peanut
oil equal parts) until very
finely suspended and until
the chloroform is evapo-
rated, then incorporate with
the petrolatum.

Bruhn's Formula.

Scarlet-red 5 to 10 grams
Lanoline,
Paraffin oint-
ment, equal
parts, to make 100 grams

German Hospital, Philadelphia.

Scarlet-red ... 8 grams
Castor oil ... 10 grams
Petrolatum to
make ... 100 grams

Scarlet-red in the above formulae is the medicinal variety. It is a dark brownish-red bulky powder, m.p. 185° C., insoluble in water, slightly soluble in cold alcohol, acetone, ether, and benzol, but soluble on boiling. It is soluble in chloroform (1-15), also soluble in fixed oils and fats, but not readily soluble in petrolatum or paraffin. When applied to ulcers the ointment is spread on gauze and covered by a bandage, the skin around the ulcer being covered with zinc-ointment to avoid irritation. The dressing should not remain longer than twenty-four hours, the wound being then carefully cleared before a fresh application. Should irritation occur, then a dressing of boric-acid ointment should be substituted for one or two days, after which a weaker ointment of scarlet-red may be applied.

Scarlet-red Dusting-powder.

UNDER the name of "Pulvis adustum cum amidoazotoluolo," or "Pulvis inspersorius cum amidoazotoluolo," the following are given in the "Journal of the American Pharmaceutical Association":

Vittorio Paire's Formula.

Scarlet-red ... 10 grams
Boric acid, very
finely powdered 90 grams

Paul Michaelis's Formula.

Scarlet-red ... 10 grams
Zinc peroxide ... 20 grams
Bismuth sub-
nitrate ... 70 grams

These powders are best applied by means of an insufflator.

Chondrus Lubricating-jelly.

Formalin ... 80 minims
Boric acid ... 16 oz.
Irish moss ... 12 oz.
Distilled water to make ... 5 gals.

Cut up the Irish moss, wash it, and put it with the boric acid into 4 gals. of water on a water-bath and heat for three hours. When cool, decant from the sediment, and add the formalin and water to make 5 gals.

Journal of the American Pharmaceutical Association.

Collyrium Adstringens Luteum.

Yellow Astringent Eye-Lotion, Ph. Aust. VIII.

Zinc sulphate ... 5 parts
Ammonium chloride ... 2 parts
Camphor ... 2 parts
Saffron ... 1 part
Alcohol (68 per cent.) ... 100 parts
Water ... 890 parts

Dissolve the salts in the water, and add the camphor previously dissolved in the alcohol. Lastly add the saffron, set aside for twenty-four hours, shaking frequently, then filter.

Rubber Solution.

AHRENS ("Chemiker Zeitung") finds that the best solvent for rubber is amyl acetate. He states that a solution prepared in the manner indicated preserves the structure of the rubber better than with any other solvent, and that a 10-per-cent. solution is as strong as an 18-per-cent. made by trituration. Para rubber cut into small pieces is placed with six times its weight of amyl acetate,

but care must be taken not to shake the mixture—it is gently stirred occasionally with a glass rod. In about eight days the solution is made, the impurities have sunk to the bottom, and by decantation is obtained an amber colour liquid, having the appearance of castor oil, which is less affected by light and air than any other solution. Rubber can be precipitated from the liquid by means of alcohol.

Unguentum Adhæsivum.

Ac. salicyl. ... 5j.
Pyrogallol ... 5ij.
Liq. carb. deterg. ... 5ij.
Zinci oxid. ... 5ij.
Sapo. virid. ... 5iiss.
Lanolin. anhyd. ... 5iiss.

Misce.

Used in the treatment of eczema. Adheres persistently to the skin.—*Pharm. Zeitung.*

Quinine and Urea Hydrochloride.

THIS double salt, which is recommended as a non-irritating local anæsthetic for hypodermic use, is thus prepared: Dissolve quinine hydrochloride 400 parts in hydrochloric acid 300 parts, add pure urea 60 or 61 parts, and warm till dissolved. Filter through glass wool and allow to crystallise. The crystals are soluble in their weight of water. The solution, which is acid, is employed of a strength of from $\frac{1}{4}$ to 1 per cent.

A Good Paste.

MR. J. H. EGGERS in the "Chemical News" gives the following formula for a satisfactory adhesive paste:

White dextrin ... 2 $\frac{3}{4}$ lb.
Water at 160° F. ... 40 oz.
Oil of wintergreen ... 15 drops.
Oil of clove ... 15 drops.

Bring the water to 160° F. and stir the dextrin in slowly, taking care not to allow the temperature to vary more than 1° either way until the dextrin has dissolved to a perfectly clear solution. As soon as the dextrin has passed into solution, add the essential oils, allow the solution to cool, and pour into bottles and cork. These bottles must then be set aside for a week or two, to permit the paste to congeal. As soon as the paste "sets," it will have a perfectly white colour, and will possess the firm consistency which is characteristic of library paste. In order to use it, it is necessary to add a little water, and work it around with a brush. In preparing this paste care should be taken to use the best grade of white dextrin. The whole secret of the process of manufacturing is in maintaining the temperature at 160° F. At this temperature the dextrin undergoes certain peculiar molecular changes, and any serious variation from it results in a very inferior product.

Nit Lotion.

SWAB the scalp with cotton-wool dipped in the following solution:

Simple tincture of benzoin ... 3 parts
Mercury perchloride ... 1 part
Glacial acetic acid ... 30 parts
Eau de Cologne to make ... 500 parts

The effect of the acid is to dissolve the envelope of the eggs. After using the lotion a fine small-toothed comb is used to remove the nits.

Openings in Yorkshire.

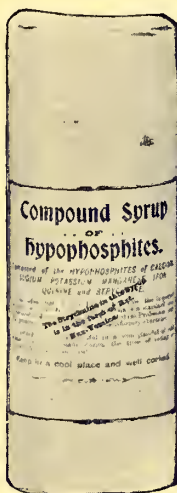
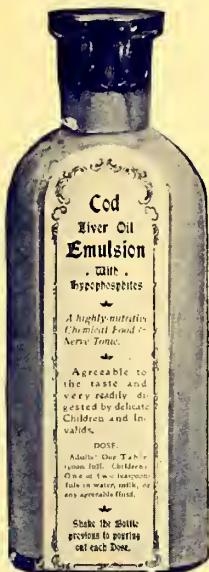
One of our provincial correspondents writes:

"Tradesmen in search of new openings would do well to turn their attention to the district about Doncaster and Barnsley, where the boom in newly developing coal-fields is giving rise to conditions somewhat resembling the rushes for the world's new gold-fields. Within a year from date, 45,000 additional miners are to be employed thereabouts, and, of course, that leads also to increases of persons in many allied occupations. Villages have already doubled their populations in the last two years or less. The builders cannot keep pace with the increase. In some places people are sleeping in barns and other outbuildings for want of accommodation. The new coal is said to be incalculable in quantity and to stretch from South Yorkshire through Lincolnshire to the sea coast."

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